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ATD 224
W2W34

APRIL 1991

GENERAL OUTLOOK

SUMMARY:

APRIL 1, 1991: MARCH ROARED IN LIKE A LION WITH THE FIRST WEEK PROVIDING NEARLY THE MONTHLY PRECIPITATION TOTAL. PRECIPITATION WAS 113% OF NORMAL STATE WIDE, AND VARIED FROM 140% OF AVERAGE IN THE WALLA WALLA BASIN TO 68% IN THE OLYMPIC BASIN. FORECASTS FOR 1991 RUNOFF VARY FROM 158% OF AVERAGE FOR THE SIMILKAMEEN RIVER TO 49% ON MILL CREEK IN THE WALLA WALLA BASIN. THE SNOWPACK IS BELOW NORMAL STATE WIDE, AND VARIES FROM 64% IN THE WALLA WALLA BASIN TO 132% IN THE CHELAN BASIN. WASHINGTON'S SNOTEL SITES ARE AVERAGING 85% OF NORMAL SNOWPACK ON APRIL 1 (BY APRIL 8, THE STATEWIDE AVERAGE WAS 90%). YEAR-TO-DATE PRECIPITATION VARIES FROM 75% IN THE COLVILLE TO 132% IN THE NORTH PUGET. MARCH TEMPERATURES WERE NEAR NORMAL AND VARIED FROM 1 DEGREES ABOVE IN THE OKANOGAN BASIN TO 2 DEGREES BELOW IN THE NORTH PUGET BASIN. APRIL 1 RESERVOIR STORAGE IS GENERALLY GOOD THROUGHOUT THE STATE, WITH RESERVOIRS IN THE YAKIMA BASIN AT 126% OF AVERAGE AND 88% OF CAPACITY. MARCH STREAMFLOWS VARIED FROM 232% OF NORMAL ON THE SIMILKAMEEN RIVER TO 51% ON THE SNAKE RIVER.

SNOWPACK:

The first week of March saw several storms deposit rain and snow across Washington, that improved the snowpack. Snowpack varies over the state from 132% of normal in the Chelan Basin to 64% in the Walla Walla Basin. The Yakima Basin is now at 75%, up from 60%. Snowpack along the west slopes of the Cascade Mountains includes the Green with 87%, the Cowlitz Basin with 74%, and the Skagit 125%. Snowpack in the Wenatchee Basin is 90% of normal; the Okanogan at 108%, and the Spokane at 91%. SNOTEL sites in Washington are showing snowpack 85% of average for April 1, state wide. Maximum snow cover is at Jasper Pass in the Baker River drainage, with 214 inches of depth and a water content of 94.0 inches. This site would normally have 88.0 inches of water content on April 1.

PRECIPITATION:

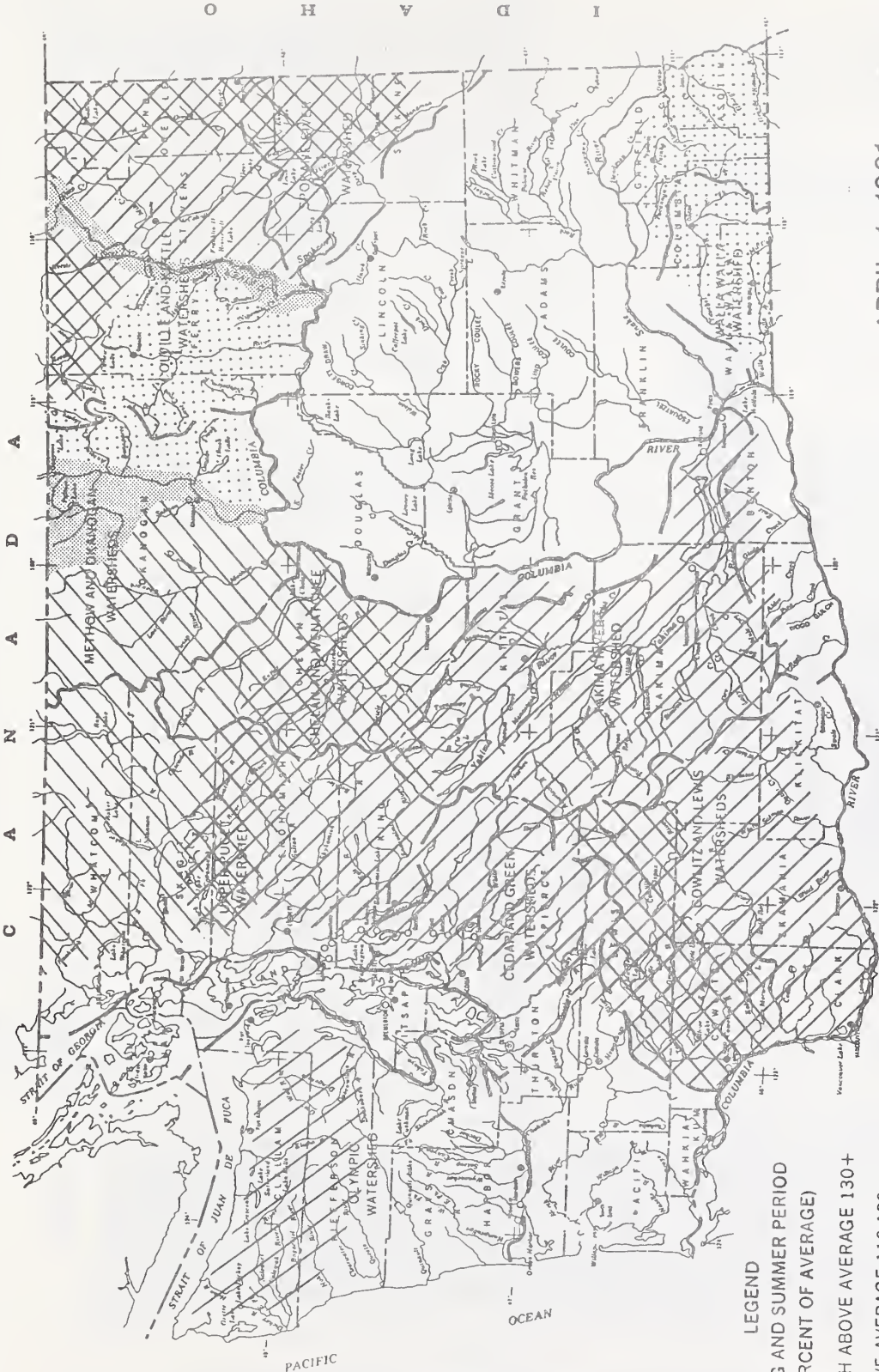
March precipitation varied from 140% of average in the Walla Walla Basin, to 68% in the Olympic Basin. Statewide, March precipitation from National Weather Service stations was 113% of average. The year-to-date precipitation varied from 132% of normal in the North Puget Basin to 75% in the Colville-Pend Oreille Basin. SNOTEL sites in Washington showed high elevation year-to-date precipitation values to be 112%. Maximum year-to-date precipitation was at the June Lake SNOTEL site near Mt. St. Helens, with 142.2 inches since October 1, 1990; normal for this site would be 134.0 inches.

RESERVOIRS:

Reservoir storage continues good, with reservoirs in Washington above average for April 1. Reservoir storage in the Yakima Basin was 934,600 acre feet, 126% of normal, the highest value in the past 10 years. Storage at other reservoirs include Roosevelt at 158% of average and the Okanogan reservoirs at 126% of April 1 normal. The power generation reservoirs contain the following: Coeur d'Alene Lake, 182,200 acre feet, or 78% of normal; Chelan Lake, 392,300 acre feet, 185% of average and 58% of capacity, and Ross Lake at 212% of average, and 45% of capacity.

STREAMFLOW:

Forecasts for summer streamflow are similar to last month and varies from 158% of average for the Similkameen River to 49% of normal on Mill Creek in the Walla Walla River Basin. April forecasts for some west side streams include: Cedar River, 80%; Skagit River, 120%; and the Dungeness River, 80%. Some east side streams include the Yakima River at Parker 75%; the Wenatchee River at Peshastin, 100%; and the Okanogan River, 151%. March streamflows were generally above average in northern Washington, and below average in southern Washington. Streamflows were the following percent of normal; the Cowlitz River, 94%; the Walla Walla River, 79%; the Spokane River, 100%; the Columbia at the Canadian border, 104%. The Wenatchee River and the Methow with 126% continued high. The Similkameen River was the highest in the state, at 232%, and the Okanogan River was 215%, .



- LEGEND**
- SPRING AND SUMMER PERIOD
(PERCENT OF AVERAGE)**
- MUCH ABOVE AVERAGE 130+
 - ABOVE AVERAGE 110-130
 - NEAR AVERAGE 90-110
 - BELOW AVERAGE 70-90
 - MUCH BELOW AVERAGE 70+ LESS
 - NOT FORECAST
 - WATERSHED BOUNDARY

**STREAMFLOW PROSPECTS
WASHINGTON**

APRIL 1, 1991



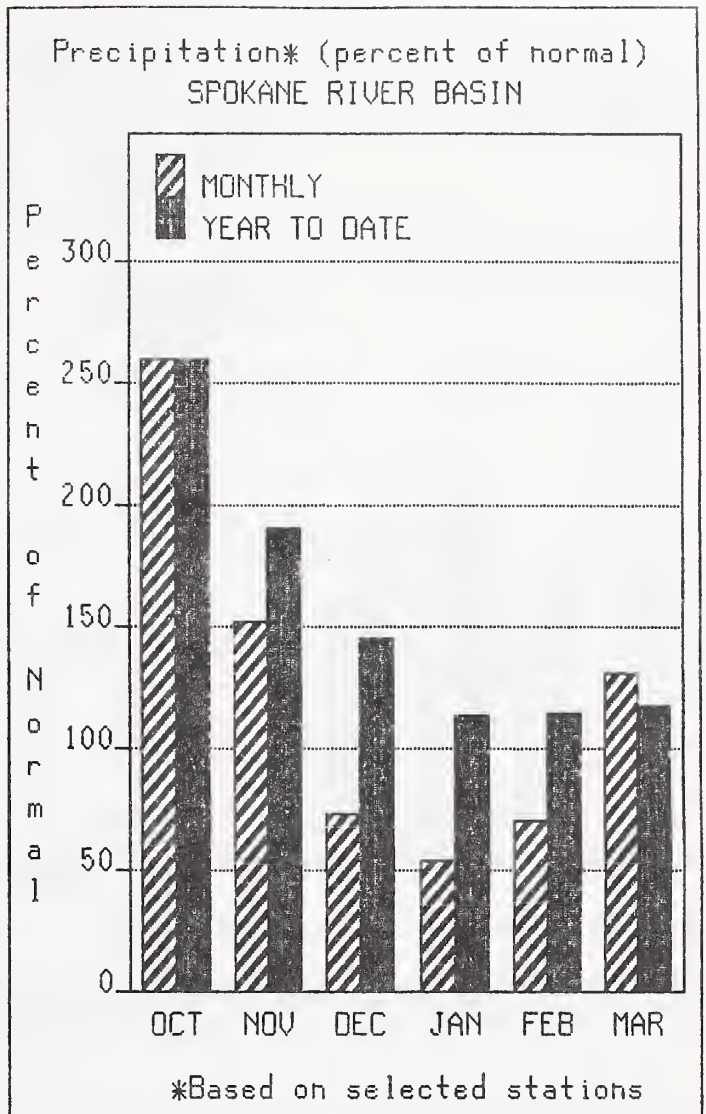
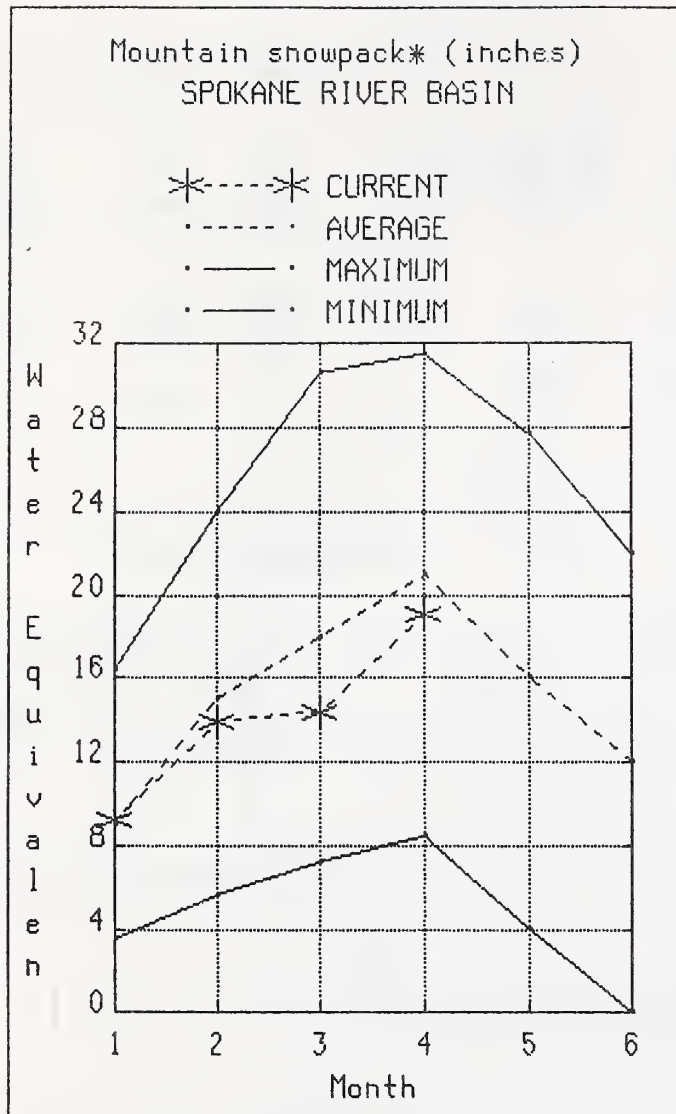
SOURCE: Data compiled by SCS
Field Personnel

BASIN SUMMARY OF
SNOW COURSE DATA

APRIL 1991

SNOW COURSE							ELEVATION	DATE	SNOW DEPTH	WATER CONTENT	LAST YEAR	AVERAGE 1961-85	SNOW COURSE							ELEVATION	DATE	SNOW DEPTH	WATER CONTENT	LAST YEAR	AVERAGE 1961-85			
PEND OREILLE RIVER														YAKIMA RIVER														
BENTON MEADOW		2370	3/28/91	9	3.8	3.6	4.2	ANTANUM R.S.	3100	3/27/91	6	1.9	2.8	5.5	BIG BOULDER CREEK	3200	3/28/91	33	12.3	23.2	18.0	16.0						
BENTON SPRING		4920	3/28/91	45	15.8	18.7	19.4	BLEWETT PASS&2PILLW	4270	4/01/91	---	12.25	18.4	24.4	BUNPING LAKE	3450	3/28/91	20	8.6	13.8	14.7	18.8						
BOYER MOUNTAIN		5250	3/26/91	57	19.4	23.4	24.6	BUNPING LAKE (NEW)	3400	3/28/91	27	11.4	18.0	18.7	BUNPING RIDGE PILLW	4600	4/01/91	---	19.55	26.2	24.9	24.9						
BUNCHGRASS MEADOWS		5000	3/25/91	85	34.0	27.6	30.4	CAYUSE PASS	5300	4/01/91	---	79.4E	77.8	85.1	CORRAL PASS PILLW	6000	4/01/91	---	33.58	39.7	37.8	37.8						
BUNCHGRASS MOWPILLW		5000	4/01/91	---	30.3	28.5	28.6	FISH LAKE	3370	3/28/91	64	26.8	34.5	32.1	FISH LAKE PILLW	3370	4/01/91	---	28.38	41.0	36.0	36.0						
HEART LAKE TRAIL		4800	3/27/91	62	20.4	22.1	22.0	GREEN LAKE	6000	3/27/91	75	24.3	30.3	34.7	GREEN LAKE PILLW	6000	4/01/91	---	17.88	16.5	21.1	21.1						
WOODOOD BASIN		6050	3/27/91	141	51.9	49.6	51.8	GROUSE CAMP	5380	4/01/91	---	12.66	15.4	18.4	LAKE CLE ELUM	2200	3/28/91	0	.0	.0	4.9							
WOODOOD CREEK		5900	3/27/91	125	44.8	42.9	47.8	MORBE LAKE	5400	4/01/91	---	53.18	48.6	51.2	OLALLIE MOWS PILLW	3960	4/01/91	---	46.25	58.0	68.3	68.3						
LOOKOUT		5140	3/24/91	79	29.0	32.6	35.1	OLALLIE MEADOWS	3630	4/01/91	55	23.6	46.8	45.3	SASSE RIDGE PILLW	4200	4/01/91	---	35.08	39.2	34.9	34.9						
SCHWEITZER RIDGE		6200	4/01/91	---	42.3E	38.8	47.9	PARADE PASS PILLW	4200	4/01/91	---	35.98	57.5	42.2	STANPEDE PASS PILLW	3860	4/01/91	---	35.98	57.5	42.2	42.2						
KETTLE RIVER														ANTANUM CREEK														
BARNES CREEK	CAN.	5300	3/26/91	67	25.4	22.6	20.6	ANTANUM R.S.	3100	3/27/91	6	1.9	2.8	5.5	GREEN LAKE	6000	3/27/91	75	24.3	30.3	34.7	34.7						
BIG WHITE MTH	CAN.	5510	3/27/91	58	20.5	16.2	19.4	GREEN LAKE PILLW	6000	4/01/91	---	17.86	16.5	21.1	GREEN LAKE	6000	4/01/91	---	17.86	16.5	21.1	21.1						
BUTTE CREEK		4070	3/28/91	26	8.5	5.0	9.6																					
CARMI	CAN.	4100	3/26/91	24	7.3	2.9	6.4																					
FARROW	CAN.	4000	4/02/91	29	10.4	10.0	13.9																					
GOAT CREEK		3600	3/28/91	10	2.9	.8	4.8																					
GRAYBROKE LAKE	CAN.	5940	3/29/91	50	17.0	16.8	17.6																					
MONASHEE PASS	CAN.	4500	3/26/91	47	16.2	15.2	14.0																					
SUNNIT G.S.		4600	3/28/91	28	8.5	5.4	8.1																					
TRAPPING CK LOW	CAN.	3050	3/26/91	14	4.8	1.1	3.5																					
TRAPPING CK UP	CAN.	4460	3/26/91	28	9.9	4.9	9.8																					
COLVILLE RIVER														WILL CREEK														
STRANCR MOUNTAIN		4230	3/27/91	30	8.9	10.8	13.6	ANTANUM R.S.	3100	3/27/91	6	1.9	2.8	5.5	GREEN LAKE	6000	3/27/91	75	24.3	30.3	34.7	34.7						
ONAK LAKE, TWIN LAKES														HILL CREEK														
MISSION (ONAK)		1150	3/29/91	0	.0	.0	--	HIGH RIDGE	4980	4/01/91	---	13.55	14.7	29.7	TOUCHET #2	5530	4/01/91	---	23.15	30.9	27.7	27.7						
MOUNT TOLMAN		2000	3/29/91	0	.0	.0	--																					
TWIN LAKES		2700	3/29/91	5	2.0	.0	--																					
SPOKANE RIVER														LEWIS - COMBUTZ RIVERS														
ABOVE BURKE		4100	4/01/91	---	13.3E	20.6	22.6	CAYUSE PASS	5300	4/01/91	---	79.4E	77.8	85.1	JUNE LAKE	3200	4/01/91	---	17.16	39.5	31.4	31.4						
FOURTH OF JULY SUM		3200	3/25/91	13	5.0	7.6	7.3	LONE PINE	3800	4/01/91	---	19.68	29.0	43.4	PARADISE PARK	5500	4/01/91	---	68.48	78.2	71.2	71.2						
LOOKOUT		5140	3/24/91	79	29.0	32.6	35.1	PICATAI PEAK	5900	4/01/91	---	58.98	61.7	51.6	POTATO MILL	4500	4/01/91	---	19.25	25.0	30.7	30.7						
LOST LAKE		6110	3/27/91	171	66.1	51.1	59.3	SHEEP CANYON	4050	4/01/91	---	29.08	80.8	46.5	SPENCER NOW	3400	4/01/91	---	13.38	34.8	29.9	29.9						
WOSUOITO RIDGE		5200	3/27/91	96	37.4	39.1	38.2	SPIRIT LAKE	3100	4/01/91	---	1.58	.0	14.7	SURPRISE LKS	4250	4/01/91	---	32.39	44.4	54.5	54.5						
WOSUOITO	PILLW	5200	4/01/91	---	36.2	39.7	38.7	WHITE PASS ES	4500	4/01/91	---	17.98	24.2	25.3														
SHERWIN		3200	4/01/91	21	8.4	11.1	12.1																					
SUNSET		5540	3/28/91	92	34.7	27.5	33.5																					
SUNSET	PILLW	5540	4/01/91	---	37.3	31.9	35.8																					
NEWMAN LAKE														WHITE RIVER														
QUARTZ PEAK	PILLW	4700	4/01/91	---	17.8	22.2	--	CAYUSE PASS	5300	4/01/91	---	79.4E	77.8	85.1	CORRAL PASS	4000	4/01/91	---	37.8E	41.5	40.9	40.9						
OKANOGAN RIVER														GREEN RIVER														
ABERDEEN LAKE	CAN.	4300	3/28/91	23	7.6	3.5	6.1	CORRAL PASS PILLW	4000	4/01/91	---	33.58	39.7	37.8	COUGAR MTH.	3200	4/01/91	---	14.18	19.9	19.2	19.2						
BLACKHALL PEAK	CAN.	4370	3/27/91	124	56.4	--	33.8	MORBE LAKE	5400	4/01/91	---	53.18	48.6	51.2	LESTER CREEK	3100	4/01/91	---	21.4E	21.8	23.8	23.8						
BRENDAN HINE	CAN.	4800	3/27/91	35	11.5	7.6	13.0																					
BROOKHIRE	CAN.	3200	4/01/91	23	8.5	6.4	8.6	OLALLIE MOWS PILLW	3960	4/01/91	---	46.28	58.0	48.3	OLALLIE MEADOWS	3630	4/01/91	55	23.6	46.8	45.3	45.3						
ENDERBY	CAN.	4200	3/28/91	106	43.6	40.7	38.6	OLNEY PASS	3250	3/27/91	37	15.0	28.7	---	STANPEDE PASS PILLW	3860	4/01/91	---	35.98	57.5	42.2	42.2						
ESPERON CK. UP	CAN.	5410	3/31/91	51	17.4	10.9	18.7																					
ESPERON CK. MID	CAN.	4690	3/31/91	44	14.9	9.2	15.5																					
ESPERON CK. LO	CAN.	4400	3/31/91	35	10.8	6.1	12.0																					
FREEZEOUT CK. TRAIL		3500	3/29/91	46	15.5	12.3	11.7																					
GREYBACK RES	CAN.	5120	3/27/91	40	11.4	7.7	9.1																					
HAMILTON HILL	CAN.	4890	3/29/91	52	18.1	13.5	15.1																					
HARTS PASS		4500	3/29/91	137	54.4	40.9	44.2																					
HARTS PASS	PILLW	4500	4/01/91	---	70.46	51.8	53.9																					
ISINTOK LAKE	CAN.	5500	3/28/91	37	11.1	4.4	7.6																					
LIGHTNING LAKE	CAN.	4000	3/28/91	47	16.2	13.2	12.7																					
MCCULLOCH	CAN.	4200	3/29/91	26	9.0	4.2	6.7																					
MISSSEZULA MTH	CAN.	5070	3/30/91	38	12.5	8.1	9.4																					
MISSION CREEK	CAN.	5800	4/02/91	65	22.9	22.1	20.4																					
MONABNEE PASS	CAN.	4500	3/26/91	47	16.2	15.2	14.0																					
MT. KOBAN	CAN.	5900	3/28/91	35	9.6	7.1	12.9																					
MUTTON CREEK #1		5700	3/28/91	34	9.3	8.4	13.4																					
OYAKA LAKE	CAN.	4400	3/28/91	26	8.1	2.9	7.0																					
POSTILL LAKE	CAN.	4500	3/30/91	32	9.5	6.2	9.0																					
RUSTY CREEK		4000	3/28/91	7	2.4	2.7	6.4																					
SALMON MOWS	PILLW	4500	4/01/91	---	6.05	6.2	13.9																					
SILVER STAR MTH	CAN.	6000	4/01/91	74	30.3	25.9	29.2																					
SUNMERLAND RES	CAN.	4200	3/26/91	33	9.4	5.7	9.5																					
SUNDAY SUMMIT	CAN.	4300	3/28/91	22	7.8	1.7	4.7																					
TROUT CREEK	CAN.	4690	3/27/91	33	9.5	4.8	7.2																					
VASEUX CREEK	CAN.	4600	3/27/91	27	7.9	4.7	6.6																					
WHITE ROCKS MTH	CAN.	6000	3/28/91	61	22.1	14.5	23.9																					
METHOW RIVER														CEDAR RIVER														
HARTS PASS		6500	3/29/91	137	54.4	40.9	44.2	CITY CABIN	2390	3/27/91	10	4.1	11.0	14.3	ALPINE MEADOWS	3500	3/27/91	96	40.9	57.0	45.4	45.4						
HARTS PASS	PILLW	6500	4/01/91	---	70.46	51.8	53.9	MT. GARONER	3300	3/27/91	---	6.7E	12.0	15.0	ARROWHIA MTH. PILLW	2400	3/27/91	51	22.1	39.6	---	---						
MUTTON CREEK #1		5700	3/28/91	34	9.3	8.4	13.6																					
RUSTY CREEK		4000	3/28/91	7	2.4	2.7	6.4																					
SALMON MOWS	PILLW	4500	4/01/91	---	6.05	6.2	13.9																					
CMELAW LAKE BASIN														SMOULALMIE RIVER														
LYMAN LAKE		5900	4/01/91	---	34.9E	59.6	59.9	STANPEDE PASS PILLW	3860	4/01/91	---	35.95	57.5	42.2	ALPINE MEADOWS	3500												

SPOKANE



WATER SUPPLY OUTLOOK:

Streamflow on the Spokane River was 100% of normal for March. April 1 storage in Coeur d'Alene Lake was 182,200 acre feet, 78% of normal. Forecasted summer runoff for the Spokane River Basin is 96% of normal. This is down from 98% last month. The forecast is based on a snowpack 91% of average and a water year-to-date precipitation value 120% of normal. Precipitation for March was 121% of average. Temperatures in the basin were 2 degrees below normal during March.

For more information, contact your local Soil Conservation Service office.

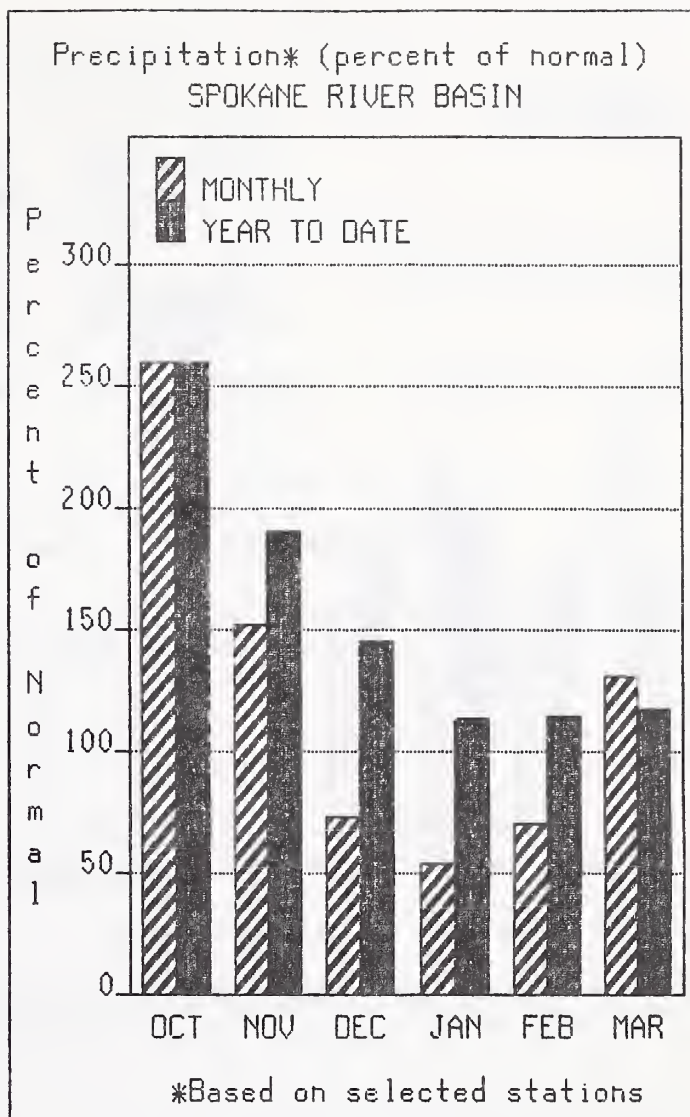
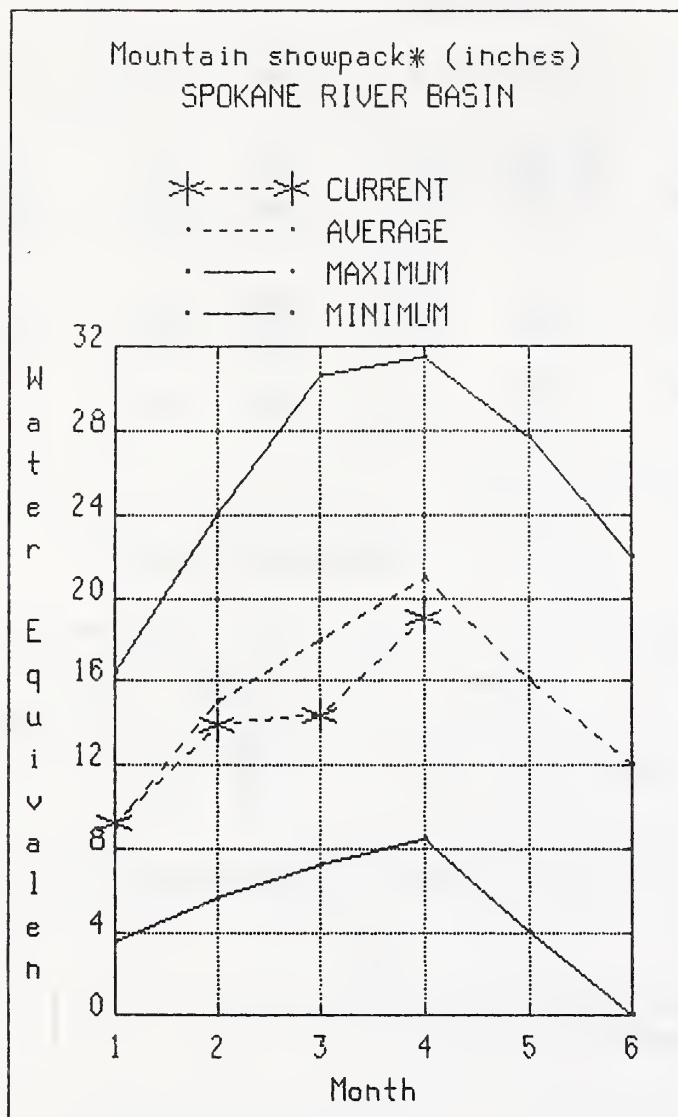
WASH. BUREAU OF SHOW COURSE DATA

APRIL 1991

SHOW COURSE	ELEVATION	DATE	SHOW DEPTH	WATER CONTENT	LAST YEAR	AVERAGE 1961-85
PENNO OREILLE RIVER						
BENTON MEADOW	2370	3/28/91	9	3.8	3.4	4.2
BENTON SPRING	4920	3/28/91	45	15.8	18.7	19.4
BOYER MOUNTAIN	5250	3/26/91	57	19.4	23.4	26.6
BUNCHGRASS MEADOWS	5000	3/25/91	85	34.0	27.6	30.6
BUNCHGRASS MOUND	5000	4/01/91	---	30.3	28.5	20.4
HEART LAKE TRAIL	4800	3/27/91	62	20.4	22.1	22.0
HOODO BASIN	6550	3/27/91	141	51.9	49.4	51.8
HOODO CREEK	5900	3/27/91	125	44.8	42.9	47.8
LOOKOUT	5140	3/24/91	79	29.0	32.4	35.1
SCHWEITZER RIDGE	6200	4/01/91	---	42.3E	38.8	47.9
KETTLE RIVER						
BARNES CREEK CAN.	5300	3/26/91	47	25.4	22.6	20.6
BIG WHITE MTH CAN.	5510	3/27/91	58	20.5	14.2	19.4
BUTTE CREEK	4070	3/28/91	26	8.5	5.0	9.6
CARMI CAN.	4100	3/26/91	24	7.3	2.9	6.4
FARROW CAN.	4000	4/02/91	29	10.4	10.8	13.9
COAT CREEK	3460	3/28/91	15	2.9	4.8	4.9
GRAYSTONE LAKE CAN.	5940	4/02/91	50	17.0	16.8	17.6
MONASHEE PASS CAN.	4500	3/26/91	47	16.2	15.2	14.0
SUNNIT G.S.	4600	3/28/91	28	8.5	5.4	9.1
TRAPPING CK LOW CAN.	3050	3/26/91	14	4.8	1.1	3.5
TRAPPING CK UP CAN.	4460	3/26/91	28	9.9	4.9	9.8
COLVILLE RIVER						
STRANGER MOUNTAIN	4230	3/27/91	30	8.9	10.8	13.6
ONAK LAKE, TWIN LAKES						
MISSION (ONAK)	1150	3/29/91	0	.0	.0	--
HOULT TOLMAN	2000	3/29/91	0	.0	.0	--
TWIN LAKES	2700	3/29/91	5	2.0	.0	--
SPOKANE RIVER						
ABOVE BURKE	4100	4/01/91	---	13.3E	20.6	22.6
FOURTH OF JULY SUH	3200	3/25/91	13	5.0	8.6	7.3
LOOKOUT	5140	3/24/91	79	29.0	32.6	35.1
LOST LAKE	6110	3/27/91	171	66.1	51.1	59.3
MOSQUITO RIDGE	5200	3/27/91	96	37.4	39.1	38.2
MOSQUITO PILLON	5200	4/01/91	---	36.2	39.7	30.7
SHERMAN	3200	4/01/91	21	8.4	11.1	12.1
SUNSET	5540	3/28/91	92	34.7	27.5	33.5
BURSET PILLON	5540	4/01/91	---	37.3	31.9	35.8
NENAH LAKE						
QUARTZ PEAK PILLON	4700	4/01/91	---	17.8	22.2	--
OKANOGA RIVER						
ABERDEEN LAKE CAN.	4300	3/28/91	23	7.6	3.5	6.1
BLACKHALL PEAK CAN.	4370	3/27/91	124	56.4	--	33.8
BRENOA HINE CAN.	4800	3/27/91	35	11.5	7.6	13.0
BROOKHIRE CAN.	3200	4/01/91	23	8.5	6.4	8.6
ENOSBY CAN.	4200	3/28/91	106	43.6	40.7	38.6
ESPERON CK. UP CAN.	5410	3/31/91	51	17.4	10.9	18.7
ESPERON CK. MID CAN.	4690	3/31/91	44	14.9	9.2	15.5
ESPERON CK. LO CAN.	4400	3/31/91	35	10.8	6.1	12.0
FREEZEOUT CK. TRAIL	3500	3/29/91	46	15.5	12.3	11.7
GREYBACK RES CAN.	5120	3/27/91	40	11.4	7.7	9.1
HAMILTON HILL CAN.	4890	3/28/91	52	18.1	13.5	15.1
HARTS PASS CAN.	4500	3/29/91	137	54.4	44.2	44.2
HARTS PASS PILLON	4500	4/01/91	---	70.4E	51.8	53.9
ISINTOK LAKE CAN.	5500	3/28/91	37	11.1	4.4	7.6
LIGHTNING LAKE CAN.	4000	3/28/91	47	16.2	13.2	12.7
NCCULLOCH CAN.	4200	3/29/91	26	9.0	4.2	6.7
MISSEZULA MTH CAN.	5090	3/30/91	38	12.5	8.1	9.4
MISSION CREEK CAN.	5800	4/02/91	65	22.9	22.1	20.4
MONASHEE PASS CAN.	4500	3/26/91	47	16.2	15.2	14.0
NT. KOBAN CAN.	5900	3/28/91	35	9.6	7.1	12.9
HUTTON CREEK #1 CAN.	5700	3/28/91	34	9.3	8.4	13.4
OTARA LAKE CAN.	4400	3/28/91	26	8.1	2.9	7.0
POSTILL LAKE CAN.	4500	3/30/91	32	9.5	6.2	9.0
RUSTY CREEK CAN.	4000	3/28/91	7	2.4	6.4	6.4
SALMON MTHS PILLON	4500	4/01/91	---	6.0E	6.2	13.9
SILVER STAR MTH CAN.	6000	4/01/91	74	30.3	25.9	29.2
SUNMERLAND RES CAN.	4200	3/26/91	33	9.4	5.7	9.5
SUNDAY SUNNIT CAN.	4300	3/28/91	22	7.8	1.7	4.7
TROUT CREEK CAN.	4690	3/27/91	33	9.5	4.8	7.2
VASEUX CREEK CAN.	4600	3/27/91	27	7.9	4.7	6.6
WHITE ROCKS MTH CAN.	6000	3/28/91	61	22.1	14.5	23.9
METHOW RIVER						
HARTS PASS	6500	3/29/91	137	54.4	40.9	44.2
HARTS PASS PILLON	6500	4/01/91	---	70.4E	51.8	53.9
HUTTON CREEK #1	5700	3/28/91	34	9.3	8.4	13.4
RUSTY CREEK	4000	3/28/91	7	2.4	6.4	6.4
SALMON MTHS PILLON	4500	4/01/91	---	6.0E	6.2	13.9
CHELAN LAKE BASIN						
LYNAM LAKE	5900	4/01/91	---	34.9E	59.6	59.9
LYNAM LAKE PILLON	5900	4/01/91	---	81.1E	67.6	64.3
MTHS RIDGE PILLON	4200	4/01/91	---	71.6E	55.8	--
PARK CREEK RIDGE	4400	4/01/91	---	59.2E	40.0	42.8
PARK CK RIDGE PILLON	4400	4/01/91	---	60.4E	34.8	44.8
RAINY PASS	4780	3/28/91	124	47.2	40.8	40.0
RAINY PASS PILLON	4780	4/01/91	---	61.0E	45.7	46.3
ENTIAT RIVER						
BRIEF	1400	3/26/91	0	.0	.0	2.9
POPE RIDGE PILLON	3540	4/01/91	---	13.3E	13.7	14.8
WENATCHEE RIVER						
BERNE-HILL CREEK	3170	3/27/91	66	23.8	30.7	27.4
BLEHETT PASS#2 PILLON	4270	4/01/91	---	12.2E	10.4	24.4
CHIMAUUKU G.S.	2500	3/27/91	20	7.1	8.4	9.4
FISH LAKE PILLON	3370	4/01/91	---	28.3E	41.0	36.0
LYNAM LAKE	5900	4/01/91	---	34.9E	59.6	59.9
LYNAM LAKE PILLON	5900	4/01/91	---	81.1E	67.6	64.3
MERRITT	2140	3/27/91	26	9.6	13.6	13.7
MISSION RIDGE	5000	3/26/91	47	12.1	11.0	--
STEVENS PASS PILLON	4070	4/01/91	---	44.0E	54.8	43.0
STEVENS PASS SAND SO	3700	3/27/91	77	28.4	36.0	34.6
TROUGH #2 PILLON	5310	4/01/91	---	4.9E	2.6	12.2
UPPER WHEELER	4400	3/27/91	19	4.6	4.7	8.5
UPPER WHEELER PILLON	4400	4/01/91	---	10.8E	7.9	16.6
STEHLITZ CREEK						
STEWILT SLIOE	5000	3/27/91	34	9.8	9.8	13.4
UPPER WHEELER	4400	3/27/91	19	4.6	4.7	8.5
UPPER WHEELER PILLON	4400	4/01/91	---	10.8E	7.9	16.6
COLOCAN CREEK						
TROUGH #2 PILLON	5310	4/01/91	---	4.9E	2.6	12.2

SHOW COURSE	ELEVATION	DATE	SHOW DEPTH	WATER CONTENT	LAST YEAR	AVERAGE 1961-85	
YAKIMA RIVER							
ANTAHUM R.S.	3100	3/27/91	6	1.9	2.8	5.5	
BIG BOULDER CREEK	3200	3/28/91	33	12.3	23.2	18.0	
BLEWETT PASS#2PILLON	4270	4/01/91	---	12.2E	18.4	24.4	
BUMPHINC LAKE	3450	3/28/91	20	8.6	13.8	14.7	
BUMPHINC LAKE (NEW)	3400	3/28/91	27	11.4	18.0	18.8	
BUMPHINC RIDGE PILLON	4600	4/01/91	---	19.5E	26.2	24.9	
CAYUSE PASS	5300	4/01/91	---	79.4E	77.8	85.1	
CORRAL PASS PILLON	6000	4/01/91	---	33.5E	39.7	37.8	
FISH LAKE	3370	3/28/91	64	26.8	34.5	32.1	
FISH LAKE PILLON	3370	4/01/91	---	28.3E	41.0	36.0	
GREEN LAKE	6000	3/27/91	75	24.3	30.3	34.7	
GREEN LAKE PILLON	6000	4/01/91	---	17.8E	16.5	21.1	
GROUSE CAMP PILLON	5380	4/01/91	---	12.6E	15.4	18.4	
LAKE CLE ELUM	2200	3/28/91	0	.0	.0	4.9	
MORSE LAKE PILLON	5400	4/01/91	---	33.1E	48.6	51.2	
OLALLIE MTHS PILLON	3960	4/01/91	---	46.2E	58.0	68.3	
OLALLIE HEADONS	3630	4/01/91	55	23.6	46.8	45.5	
SABSE RIDGE PILLON	4200	4/01/91	---	23.0E	39.2	34.9	
STANPEOE PASS PILLON	3840	4/01/91	---	35.9E	57.5	42.2	
TUNNEL AVENUE	2450	3/27/91	33	12.5	21.3	21.7	
WHITE PASS ES PILLON	4500	4/01/91	---	17.9E	26.2	25.3	
ANTAHUM CREEK							
ANTAHUM R.S.	3100	3/27/91	6	1.9	2.8	5.5	
GREEN LAKE	6000	3/27/91	75	24.3	30.3	34.7	
GREEN LAKE PILLON	6000	4/01/91	---	17.8E	16.5	21.1	
MILL CREEK							
HIGH RIDGE PILLON	4980	4/01/91	---	13.5E	14.7	29.7	
TOUCHET #2 PILLON	5530	4/01/91	---	23.1E	30.9	27.7	
LEHIGH - COWLITZ RIVERS							
CAYUSE PASS	5300	4/01/91	---	79.4E	77.8	85.1	
JUNE LAKE PILLON	3200	4/01/91	---	17.1E	39.5	31.4	
LOME PINE PILLON	3800	4/01/91	---	19.6E	29.0	43.4	
PARADISE PARK PILLON	5500	4/01/91	---	68.4E	78.2	71.2	
PICATAIL PEAK PILLON	5900	4/01/91	---	58.9E	61.7	51.6	
POTATO MILL PILLON	4500	4/01/91	---	19.2E	25.0	30.7	
SHEEP CANYON PILLON	4050	4/01/91	---	29.0E	80.8	46.5	
SPENCER MTH PILLON	3400	4/01/91	---	13.3E	36.8	29.9	
SPIRIT LAKE PILLON	3100	4/01/91	---	1.5E	.0	14.7	
SURPRISE LKS PILLON	4250	4/01/91	---	32.3E	44.4	54.5	
WHITE PASS ES PILLON	4500	4/01/91	---	17.9E	26.2	25.3	
WHITE RIVER							
CAYUSE PASS	5300	4/01/91	---	79.4E	77.8	85.1	
CORRAL PASS PILLON	6000	4/01/91	---	37.8E	41.5	40.9	
CORRAL PASS PILLON	6000	4/01/91	---	33.5E	39.7	37.8	
MORSE LAKE PILLON	5400	4/01/91	---	53.1E	48.6	51.2	
GREEN RIVER							
COUGAR MTH. PILLON	3200	4/01/91	---	16.1E	19.9	19.2	
LESTER CREEK	3100	4/01/91	---	21.4E	21.8	23.8	
SAMMILL RIDGE	4700	4/01/91	---	33.7E	38.0	37.4	
STANPEOE PASS PILLON	3840	4/01/91	---	35.9E	57.5	42.2	
CEDAR RIVER							
CITY CASIN	2390	3/27/91	10	4.1	11.0	14.3	
MT. CARONER	3300	3/27/91	---	6.7E	12.0	15.0	
SHOQUALHE RIVER							
ALPINE HEADONS	3500	3/27/91	96	40.9	57.0	45.4	
KROMONA HINE	2400	3/27/91	51	22.1	39.6	--	
OLALLIE MTHS PILLON	3960	4/01/91	---	46.2E	58.0	68.3	
OLALLIE HEADONS	3630	4/01/91	55	23.6	46.8	45.5	
OLNEY PASS	3250	3/27/91	37	15.0	28.7	--	
SKYKOMISH RIVER							
STANPEOE PASS PILLON	3840	4/01/91	---	35.9E	57.5	42.2	
STEVENS PASS PILLON	4070	4/01/91	---	44.0E	54.8	43.0	
STEVENS PASS SAMO SO	3700	3/27/91	77	28.4	36.0	34.6	
SKAGIT RIVER							
BEAVER CREEK TRAIL	2200	3/30/91	28	9.4	11.8	12.2	
BEAVER PASS	3680	3/29/91	68	25.3	29.4	30.4	
BROWN TOP AM	6000	3/29/91	203	84.3	61.2	60.8	
DEVILS PARK	5900	3/29/91	161	65.9	45.0	43.6	
FREEZEOUT CK. TRAIL	3500	3/29/91	46	15.5	12.3	11.7	
MARTE PASS	6500	3/29/91	137	54.4	40.9	44.2	
MARTE PASS PILLON	6500	4/01/91	---	70.4E	51.8	53.9	
KLEBLIKHA CAN.	3710	3/26/91	38	14.6	13.5	12.4	
LIGHTMIND LAKE CAN.	4000	3/28/91	47	16.2	13.2	12.7	
LYNAM LAKE	5900	4/01/91	---	34.9E	59.6	59.3	
LYNAM LAKE PILLON	5900	4/01/91	---	84.1E	67.6	64.9	
MEADOWS CABIN	1900	3/28/91	12	4.3	6.5	5.1	
NEE MOZONEHE LAKE	2800	3/29/91	40	12.3	9.8	11.0	
RAINY PASS	4780	3/28/91	124	47.2	40.8	40.0	
RAINY PASS PILLON	4780	4/01/91	---	61.0E	45.7	46.3	
THUNDER BASIN	4200	3/28/91	65	21.2	23.0	22.0	
BAKER RIVER							
DOCK BUTTE	AM	3800	3/27/91	120	54.0	60.0	67.7
EASY PASS	AM	5200	3/27/91	208	96.0	86.0	85.2
JASPER PASS	AM	5400	3/27/91	214	94.0	76.0	88.8
MARTEN LAKE	AM	3600	3/27/91	174	76.0	77.0	75.3
MT. SLUM	AM	5800	3/27/91	189	86.0	75.0	63.2
ROCKY CREEK	AM	2100	3/27/91	63	27.0	40.0	28.4
SCHRIEDERS MTH	AM	3400	3/27/91	108	49.0	52.0	61.7
WATSON LAKE	AM	4500	3/27/91	144	61.0	67.0	67.5
ELMA RIVER							
HURRICANE	4500	3/29/91	38	11.6	21.6	23.1	
HORSE CREEK							
COX VALLEY	4500	3/30/91	75	29.8	38.7	40.0	
OUNGEMEBB RIVER							
OGER PARK	5200	3/31/91	39	14.0	18.9	21.7	
OUTLCENE RIVER							
MOUNT CRAC PILLON	4050	4/01/91	---	13.1E	22.7	--	
HYMOOCHEE RIVER							
CARROL PASS	3650	3/30/91	31	10.3	31.6	28.4	

SPOKANE



WATER SUPPLY OUTLOOK:

Streamflow on the Spokane River was 100% of normal for March. April 1 storage in Coeur d'Alene Lake was 182,200 acre feet, 78% of normal. Forecasted summer runoff for the Spokane River Basin is 96% of normal. This is down from 98% last month. The forecast is based on a snowpack 91% of average and a water year-to-date precipitation value 120% of normal. Precipitation for March was 121% of average. Temperatures in the basin were 2 degrees below normal during March.

For more information contact your local Soil Conservation Service office.

SPOKANE RIVER BASIN

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	FUTURE CONDITIONS						
		<----- DRIER ----->		FUTURE CONDITIONS		----- WETTER ----->		25 YR. (1000AF)
		90% (1000AF)	70% (1000AF)	50% (MOST PROBABLE) (1000AF) (% AVG.)	30% (1000AF)	10% (1000AF)		
SPOKANE nr Post Falls (1,2)	APR-SEP	1840	2440	2710	96	2980	3550	2820
	APR-JUL	1770	2350	2610	96	2870	3450	2723
SPOKANE at Long Lake (2)	APR-JUL	2070	2580	2920	96	3260	3770	3045

RESERVOIR STORAGE (1000AF)					WATERSHED SNOWPACK ANALYSIS		
RESERVOIR	USEABLE : CAPACITY:	** USEABLE STORAGE **			WATERSHED	NO. COURSES AVG'D	THIS YEAR AS % OF ----- LAST YR. AVERAGE
	: YEAR	THIS YEAR	LAST YEAR	AVG.			
COEUR D'ALENE	291.2	182.2	212.8	234.3	Spokane River	20	98 91

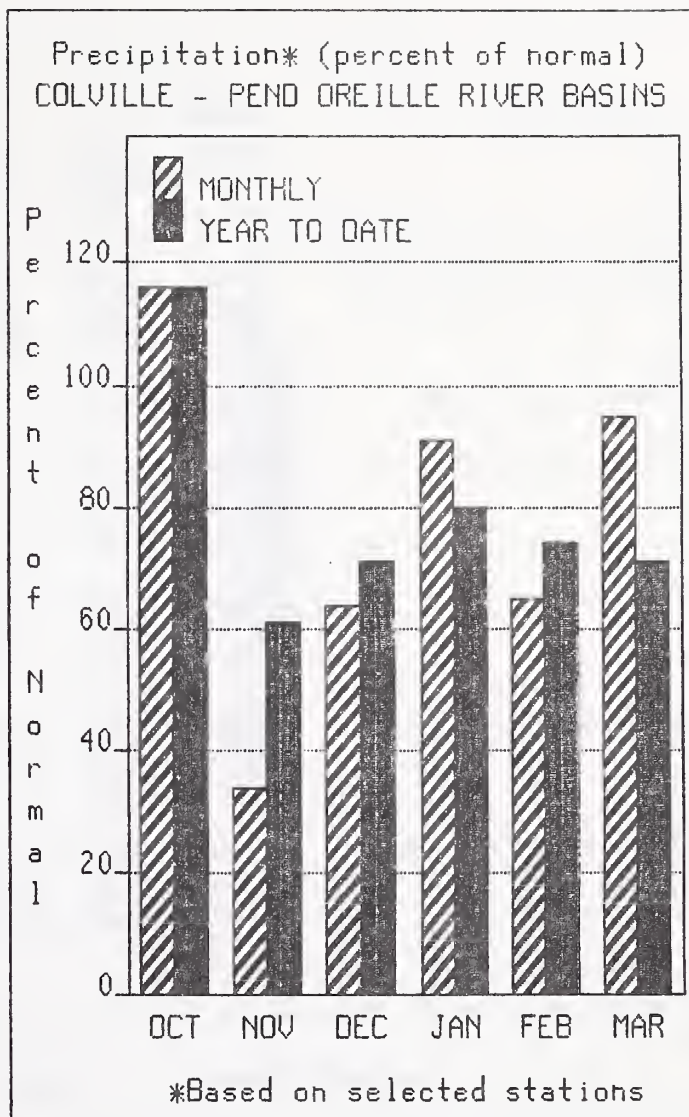
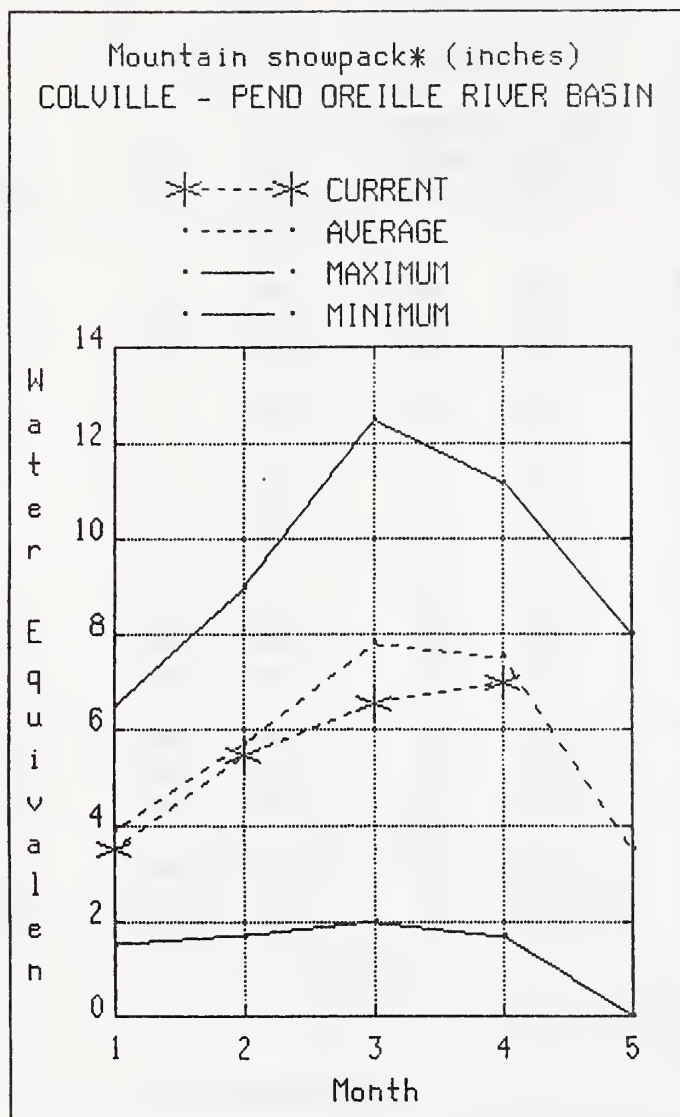
* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

The average is computed for the 1961-1985 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.

(2) - The value is natural flow - actual flow may be affected by upstream water management.

COLVILLE - PEND OREILLE



WATER SUPPLY OUTLOOK:

Precipitation during March was 101% of average, bringing the water year-to-date to 75% of normal. April 1 snow cover is 91% of average on the Pend Oreille, 105% on the Kettle, and 65% on the Colville River. Snowpack at Bunchgrass Meadow SNOTEL site was 30.3 inches of water, the average April 1 reading is 28.6. March streamflow was 108% of normal on the Pend Oreille River, 145% on the Columbia at the International Boundary, and 185% on the Kettle River. The forecast for the Kettle River streamflow is 108% of normal, the Pend Oreille 103%, and the Colville River, 79% of normal for the summer runoff period. Temperatures averaged one degree below normal for March.

For more information contact your local Soil Conservation Service Office.

COLVILLE - PEND OREILLE RIVER BASINS

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	<div> <div><----- DRIER -----</div> <div>FUTURE CONDITIONS</div> <div>----- WETTER -----></div> </div>						
		CHANCE OF EXCEEDING *						25 YR. (1000AF)
		90% (1000AF)	70% (1000AF)	50% (MOST PROBABLE) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	
PEND OREILLE bl Box Canyon (1,2)	APR-SEP	13000	15200	16000	105	16800	19000	15170
	APR-JUL	12000	13900	14700	106	15500	17400	13900
	APR-JUN	10300	11900	12600	105	13300	15000	11960
CHAMOKANE CK nr Long Lake	MAY-AUG	3.0	6.0	8.0	72	10.0	13.0	11.1
COLVILLE at Kettle Falls	APR-SEP	62	91	110	79	129	158	140
	APR-JUL	60	84	100	78	116	140	128
	APR-JUN	57	78	93	79	108	129	118
KETTLE nr Laurier	APR-SEP	1540	1850	2060	108	2270	2560	1907
	APR-JUL	1460	1750	1950	108	2150	2420	1807
	APR-JUN	1310	1570	1750	108	1930	2170	1622
COLUMBIA at Birchbank (1,2)	APR-SEP	47800	51500	53100	120	54700	58400	44390
	APR-JUL	38200	41100	42400	120	43700	46600	35440
	APR-JUN	27800	29900	30800	120	31700	33800	25650
COLUMBIA at Grand Coulee Dm (1,2)	APR-SEP	68500	74600	77300	116	80000	85800	66460
	APR-JUL	57600	62600	64800	116	67000	72000	55730
	APR-JUN	44900	48800	50500	116	52200	56100	43420

RESERVOIR STORAGE (1000AF)					WATERSHED SNOWPACK ANALYSIS			
RESERVOIR	USEABLE : CAPACITY:	** USEABLE STORAGE **			WATERSHED	NO. COURSES AVG'D	THIS YEAR AS % OF	
		THIS YEAR	LAST YEAR	AVG.			LAST YR.	AVERAGE
ROOSEVELT	5232.0	2512.5	3333.7	1586.0	Colville River	2	76	62
BANKS	715.0	608.0	709.6	583.0	Pend Oreille River	9	99	91
					Kettle River	11	129	103

* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

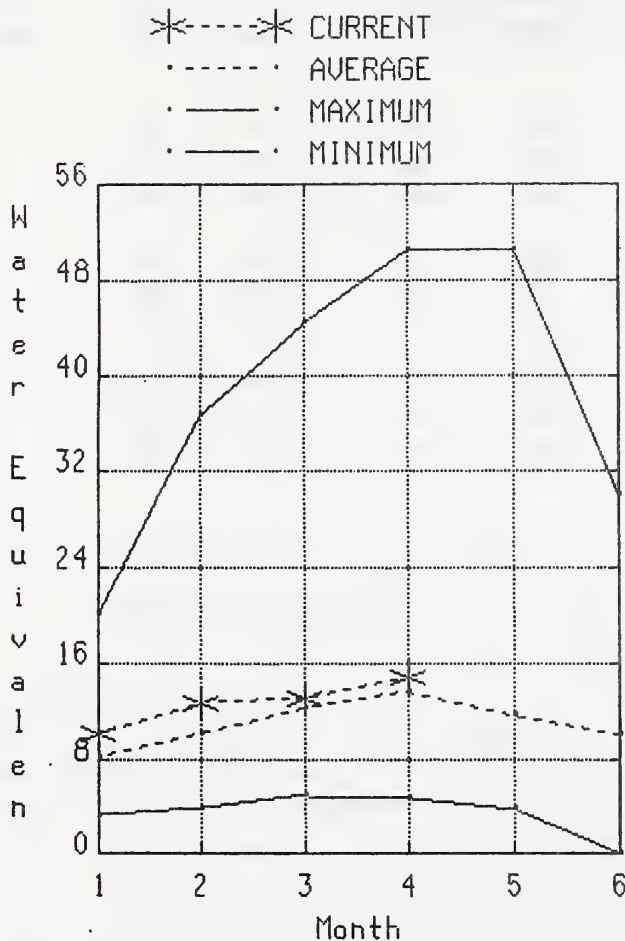
The average is computed for the 1961-1985 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.

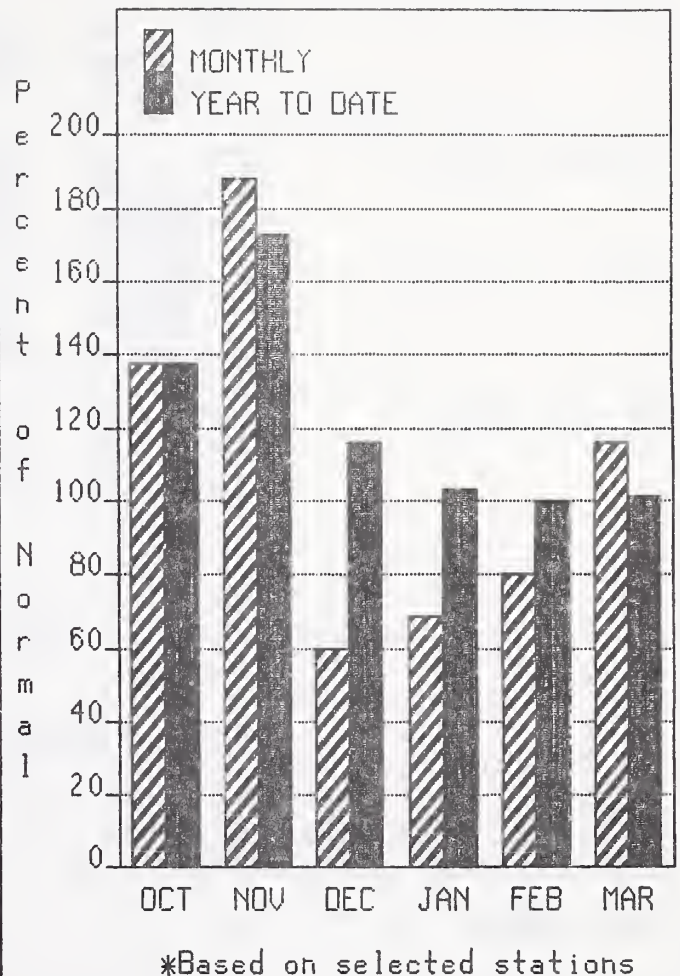
(2) - The value is natural flow - actual flow may be affected by upstream water management.

OKANOGAN AND METHOW

Mountain snowpack* (inches)
OKANOGAN - METHOW RIVER BASINS



Precipitation* (percent of normal)
OKANOGAN - METHOW RIVER BASINS



WATER SUPPLY

OUTLOOK: Summer runoff forecast for the Okanogan River is 151% of normal; the Similkameen River, 158%, the highest in the state; and the Methow River, 113% of normal. April 1 snow cover was 108% of average on the Okanogan, and 100% for the Methow Basin. March precipitation in the Okanogan-Methow was 116% of normal, with water year-to-date 100% of average. March streamflow on the Methow River was 126% of normal, 215% on the Okanogan River, and 232% on the Similkameen. Summer runoff for the area's small streams is expected to be below normal, with Salmon Meadows SNOTEL having 6.0 inches of water against a normal of 13.9. Snow water content at the Harts Pass SNOTEL, elevation 6500 feet, was 70.4 inches of water content in the pack. Temperatures were one degree above normal for the month. Storage in the Conconully Reservoirs is 19,100 acre feet, which is 81% of capacity and 127% of April 1 average.

For more information contact your local Soil Conservation Service office.

OKANOGAN - METHOW RIVER BASINS

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	<div style="display: flex; justify-content: space-between; align-items: center;"> <----- DRIER ----- FUTURE CONDITIONS ----- WETTER -----> </div>						
		CHANCE OF EXCEEDING *						
		90% (1000AF)	70% (1000AF)	50% (MOST PROBABLE) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	25 YR. (1000AF)
SIMILKAMEEN nr Nighthawk	APR-SEP	2040	2180	2270	159	2360	2500	1432
	APR-JUL	1890	2020	2110	158	2200	2330	1333
	APR-JUN	1600	1730	1810	160	1890	2020	1129
OKANOGAN RIVER nr Tonasket	APR-SEP	2050	2320	2500	151	2680	2950	1661
	APR-JUL	1860	2100	2260	151	2420	2660	1501
	APR-JUN	1570	1760	1880	150	2000	2190	1256
METHOW RIVER nr Fateros	APR-SEP	920	1030	1110	113	1190	1300	980
	APR-JUL	855	960	1030	114	1100	1210	907
	APR-JUN	715	810	875	114	940	1030	770

RESERVOIR STORAGE (1000AF)					WATERSHED SNOWPACK ANALYSIS		
RESERVOIR	USEABLE CAPACITY:	** USEABLE STORAGE **			WATERSHED	NO. COURSES AVG'D	THIS YEAR AS % OF LAST YR. AVERAGE
		THIS YEAR	LAST YEAR	AVG.			
CONCONULLY LAKE (SALMON)	10.5	9.5	8.3	8.0	Okanogan River	29	137 108
CONCONULLY RESERVOIR	13.0	9.6	8.0	7.0	Methow River	4	127 100

* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

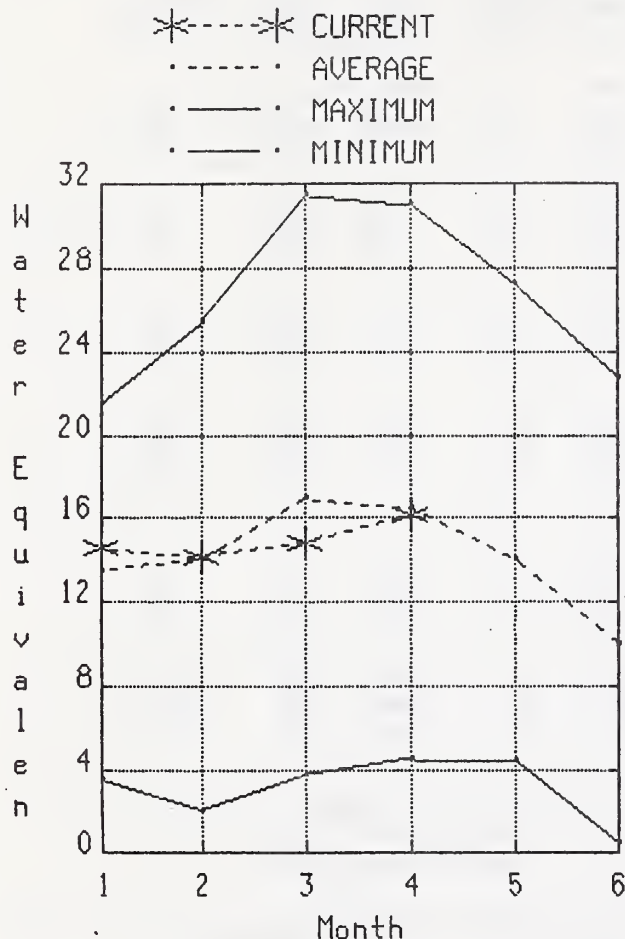
The average is computed for the 1961-1985 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.

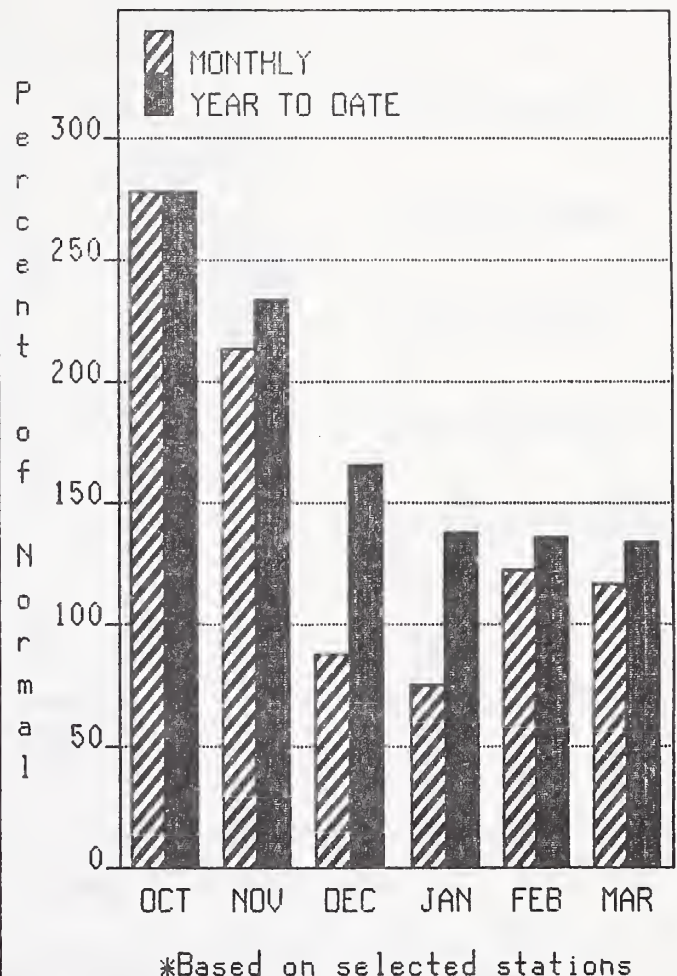
(2) - The value is natural flow - actual flow may be affected by upstream water management.

WENATCHEE AND CHELAN

Mountain snowpack* (inches)
WENATCHEE - CHELAN RIVER BASINS



Precipitation* (percent of normal)
WENATCHEE - CHELAN RIVER BASINS



WATER SUPPLY

OUTLOOK: Snowpack continues low along Colockum Ridge with only 69% of average in the Squilchuck - Stemilt drainage. April 1 snowpack in the Wenatchee Basin is 90%, up from 80% of average and the Chelan Basin 132%, up from 128%. Reservoir storage in Lake Chelan is 392,300 acre feet or 185% of April 1 average and 58% of capacity. Lyman Lake SNOTEL had the most snow water with 84.1 inches of water, this site would normally have 64.3 inches. Runoff for the Entiat River is forecast to be 95% of normal for the summer. Summer forecasts for the Chelan River are for 111%, Wenatchee River's runoff 100%, and 70% on the Squilchuck-Stemilt. Streamflow for March on the Chelan River was 106% of average and the Wenatchee River was 126% of normal. Precipitation during March was 115% of normal in the basin and 134% for the year-to-date.

For more information contact your local Soil Conservation Service office.

WENATCHEE - CHELAN RIVER BASINS

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	<----- DRIER ----- FUTURE CONDITIONS ----- WETTER ----->						25 YR. (1000AF)
		CHANCE OF EXCEEDING #						
		90% (1000AF)	70% (1000AF)	50% (MOST PROBABLE) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	
CHELAN RIVER at Chelan (1)	APR-SEP	1150	1270	1320	112	1370	1490	1182
	APR-JUL	1010	1110	1160	112	1210	1310	1040
	APR-JUN	725	855	915	112	975	1100	815
STEHEKIN R. at Stehekin	APR-SEP	845	900	935	111	970	1030	844
	APR-JUL	710	760	790	111	820	870	714
	APR-JUN	545	580	605	112	630	665	541
ENTIAT RIVER nr Ardenvoir	APR-SEP	183	210	225	97	240	265	233
	APR-JUL	171	194	210	95	225	250	221
	APR-JUN	132	150	162	95	174	193	171
WENATCHEE R. at Peshastin	APR-SEP	1190	1500	1710	102	1920	2230	1678
	APR-JUL	1050	1330	1520	100	1710	1990	1516
	APR-JUN	845	1070	1220	100	1370	1590	1216
STEMILT nr Wenatchee (miners in)	MAY-SEP	53	79	97	70	115	141	138
ICICLE CREEK nr Leavenworth	APR-SEP	235	305	350	95	400	470	370
	APR-JUL	215	280	325	96	370	435	340
	APR-JUN	174	225	260	96	295	345	270
COLUMBIA R. bl Rock Island Dam (2)	APR-SEP	75400	80900	84700	117	88500	94000	72250
	APR-JUL	63700	68400	71600	117	74800	79500	61050
	APR-JUN	49700	53400	55900	117	58400	62100	47730

RESERVOIR STORAGE (1000AF)				WATERSHED SNOWPACK ANALYSIS			
RESERVOIR	USEABLE : CAPACITY:	** USEABLE STORAGE **			WATERSHED	NO. COURSES AVG'D	THIS YEAR AS % OF
	: YEAR	THIS YEAR	LAST YEAR	AVG.			LAST YR. AVERAGE
CHELAN LAKE	676.1	392.3	235.8	212.1	Chelan Lake Basin	3	122 132
					Entiat River	2	97 68
					Wenatchee River	9	89 91
					Squilchuck Creek	0	0 0
					Stemilt Creek	2	116 69
					Colockum Creek	1	188 40

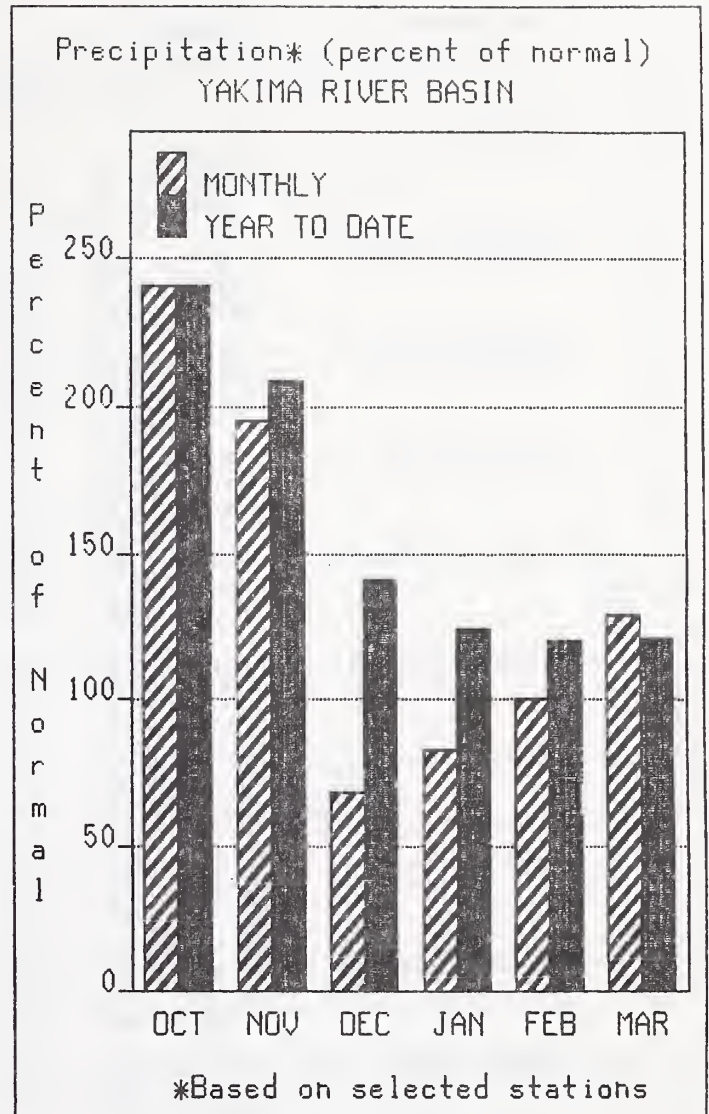
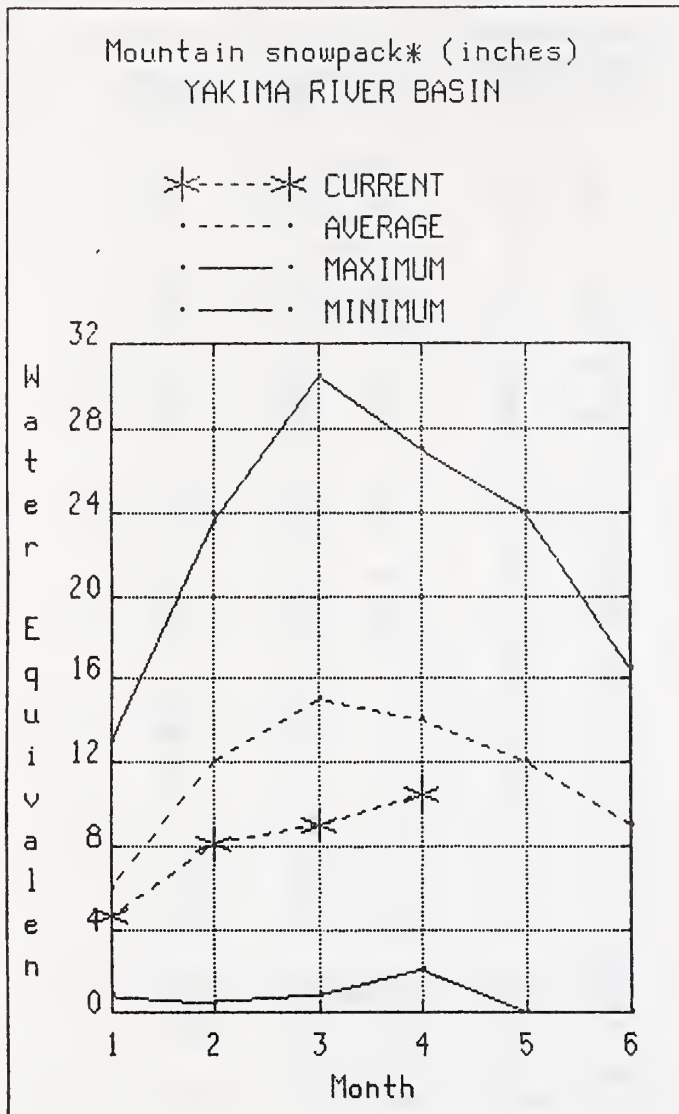
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The average is computed for the 1961-1985 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.

(2) - The value is natural flow - actual flow may be affected by upstream water management.

YAKIMA



WATER SUPPLY

OUTLOOK: The outlook for irrigation water for the summer is still good with April 1 reservoir storage for the five major reservoirs at 934,600 acre feet, the highest in the past 10 years. March precipitation was 123% of normal and 120% for the water year-to-date. April 1 snowpack is 75%, up from 60% of average on March 1, based upon 19 snow courses and SNOTEL readings. April 1 summer streamflow forecasts for the Yakima Basin vary throughout the basin as follows: the Yakima River at Cle Elum, 77%; Naches River, 80%; the Yakima River at Parker, 75%; Ahtanum Creek, 74%, and Tieton River 82%. March streamflows were low with the Yakima River at Parker 81% of normal, 85% on the Yakima near Cle Elum, and 87% on the Naches River. Temperatures were two degrees below average for March. Volume forecasts for the Yakima Basin are for natural flow. As such, they may differ from the U. S. Bureau of Reclamation's forecast for the total water supply available which includes adjustments for reservoir operation and irrigation return flow.

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	<----- DRIER -----		FUTURE CONDITIONS		>----- WETTER ----->		25 YR. (1000AF)
		90% (1000AF)	70% (1000AF)	CHANCE OF EXCEEDING #		30% (1000AF)	10% (1000AF)	
				50% (MOST PROBABLE) (1000AF)	(% AVG.)			
YAKIMA RIVER at Martin (1)	APR-SEP	91	103	108	79	114	126	136
	APR-JUL	84	95	100	79	105	116	126
	APR-JUN	74	84	88	79	93	102	112
YAKIMA RIVER at Cle Elum (2)	APR-SEP	640	695	735	77	775	830	951
	APR-JUL	570	620	655	77	690	740	846
	APR-JUN	490	535	565	77	595	640	735
YAKIMA RIVER nr Parker (2)	APR-SEP	1160	1390	1550	75	1710	1940	2075
	APR-JUL	1040	1250	1390	75	1530	1740	1862
	APR-JUN	920	1100	1230	75	1360	1540	1643
KACHESS RIVER nr Easton (1)	APR-SEP	84	97	103	77	109	122	133
	APR-JUL	72	83	88	77	93	104	114
	APR-JUN	65	75	79	77	84	93	102
CLE ELUM RIVER nr Roslyn (1)	APR-SEP	300	345	365	80	385	430	459
	APR-JUL	270	310	330	79	350	390	417
	APR-JUN	230	265	280	79	295	330	353
BUMPING RIVER nr Nile (1)	APR-SEP	82	107	118	85	129	154	139
	APR-JUL	75	98	108	84	118	141	128
	APR-JUN	62	81	89	84	98	116	106
AMERICAN RIVER nr Nile	APR-SEP	91	98	103	85	108	115	121
	APR-JUL	84	91	95	85	100	106	112
	APR-JUN	71	76	80	85	84	89	94
TIETON RIVER at Tieton (1)	APR-SEP	130	177	199	82	220	270	244
	APR-JUL	110	151	169	81	187	230	208
	APR-JUN	90	122	137	82	152	185	168
NACHES RIVER nr Naches (2)	APR-SEP	520	620	690	80	760	860	860
	APR-JUL	470	565	625	80	690	780	779
	APR-JUN	400	475	530	79	585	660	667
AHTANUM CREEK nr Tampico (2)	APR-SEP	18.0	28	35	74	42	52	47
	APR-JUL	17.0	26	32	74	38	47	43
	APR-JUN	14.0	22	27	73	32	40	37

RESERVOIR STORAGE (1000AF)					WATERSHED SNOWPACK ANALYSIS		
RESERVOIR	USEABLE CAPACITY	** USEABLE STORAGE **			WATERSHED	NO. COURSES AVG'D	THIS YEAR AS % OF LAST YR. AVERAGE
		THIS YEAR	LAST YEAR	AVG.			
KEECHULLUS	157.8	139.7	135.0	110.0	Yakima River	19	77
KACHESS	239.0	216.3	170.1	187.0	Ahtanum Creek	2	102
CLE ELUM	436.9	406.4	255.1	290.0			74
BUMPING LAKE	33.7	19.0	12.3	11.0			
RINROCK	198.0	153.2	144.8	142.0			

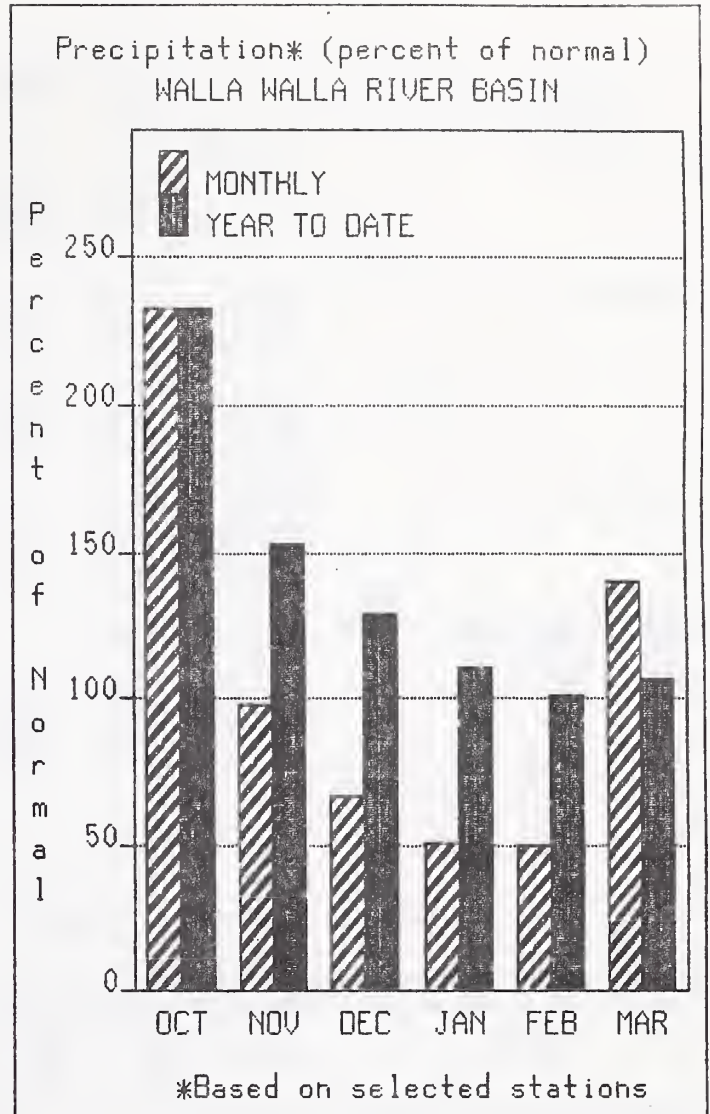
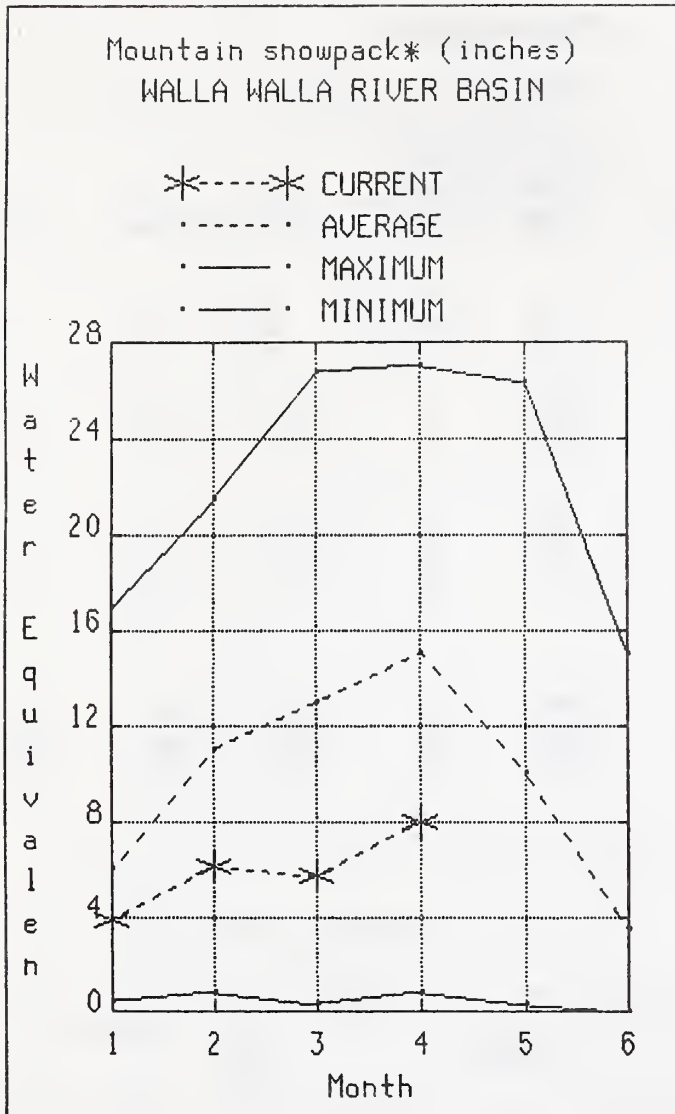
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WALLA WALLA



WATER SUPPLY OUTLOOK:

April 1 snowpack is at 64%, up from 50% of normal last month. March streamflow was 79% of normal on the Walla Walla River, 51% for the Snake River, and 79% on the Grande Ronde River near Troy. March precipitation was 140% of average bringing the water year-to-date precipitation to 107% of normal. The forecast is for 71% of average streamflow in the Walla Walla River for the coming summer, the Grande Ronde, 57%; Snake River, 61%, and 49% for Mill Creek. Temperatures were average for March.

For more information contact your local Soil Conservation Service office.

WALLA WALLA RIVER BASIN

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	<div style="display: flex; justify-content: space-between; align-items: center;"> <----- DRIER ----- FUTURE CONDITIONS ----- WETTER -----> </div>						
		CHANCE OF EXCEEDING *						
		90% (1000AF)	70% (1000AF)	50% (MOST PROBABLE) (1000AF) (% AVG.)		30% (1000AF)	10% (1000AF)	25 YR. (1000AF)
GRANDE RONDE at Troy (1)	APR-JUL	370	605	710	56	815	1050	1266
	APR-SEP	405	660	775	57	890	1140	1369
SNAKE bl Lower Granite Dam (1,2)	APR-JUL	8980	12400	13900	61	15400	18800	22760
	APR-SEP	10100	13900	15600	61	17300	21200	25578
MILL CREEK at Walla Walla	APR-SEP	2.8	6.4	8.8	50	11.2	14.8	17.7
	APR-JUL	2.5	6.1	8.5	48	10.9	14.5	17.6
	APR-JUN	2.6	6.1	8.5	49	10.9	14.4	17.3
SF WALLA WALLA nr Milton Freewater	APR-JUL	31	36	39	71	42	47	55
COLUMBIA R. at The Dalles (2)	APR-SEP	87000	95000	100000	98	105000	113000	102000
	APR-JUL	74800	81500	86000	99	90500	97200	87100
	APR-JUN	60700	66100	69800	99	73500	78900	70470

RESERVOIR STORAGE

(1000AF)

WATERSHED SNOWPACK ANALYSIS

RESERVOIR	USEABLE : ** USEABLE STORAGE **			WATERSHED	NO. COURSES AVG'D	THIS YEAR AS % OF	
	CAPACITY:	THIS	LAST			LAST YR.	AVERAGE
		YEAR	YEAR				
			AVG.	Mill Creek	2	80	64

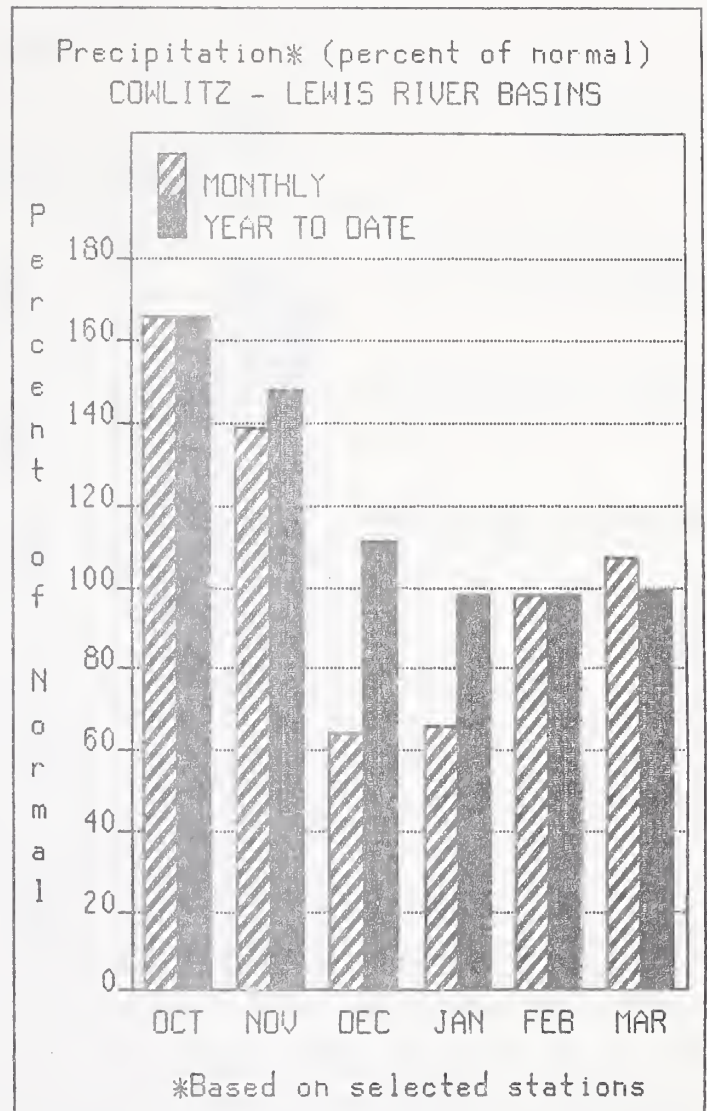
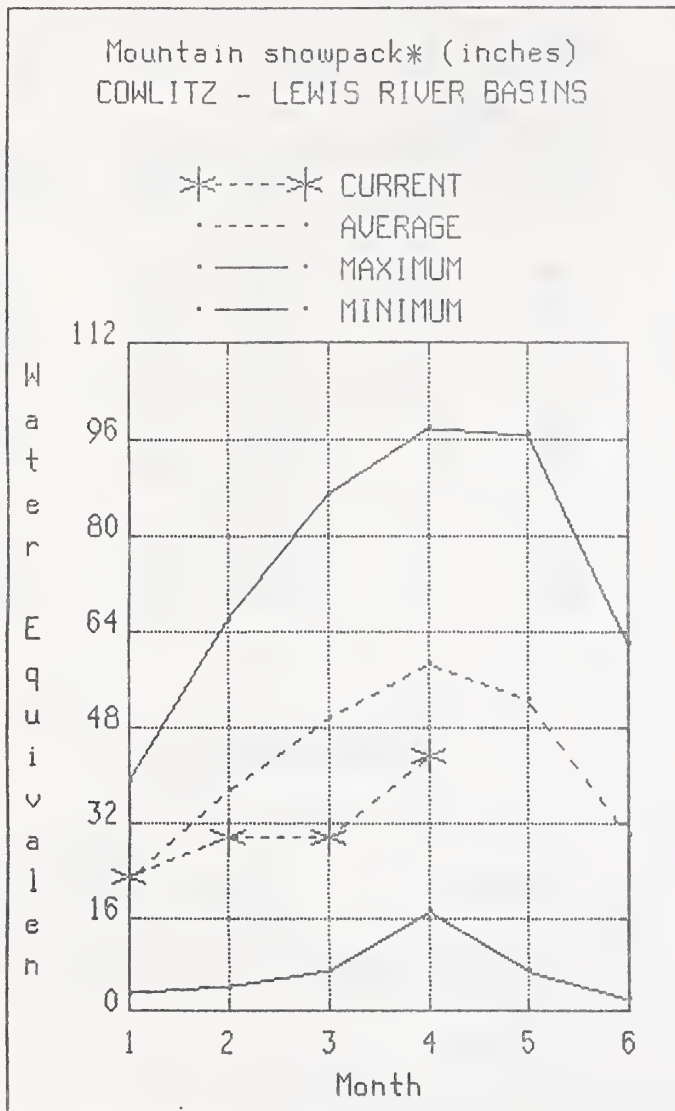
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The average is computed for the 1961-1985 base period.

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COWLITZ AND LEWIS



WATER SUPPLY OUTLOOK:

April 1 snow cover for the Cowlitz-Lewis River Basin is 74%, up from 60% of normal. The Paradise Park SNOTEL has the maximum water content for the basin with 68.4 inches of water, normal April 1 water content is 71.2 inches. Forecasts for summer runoff in the Lewis River are 80%, and for the Cowlitz River, 96%. March precipitation was 106% of normal, bringing the water year-to-date precipitation to 99% of average. March streamflow on the Cowlitz River was 94% of average, and 93% on the Lewis River. Temperatures were one degree below normal for March.

For more information, contact the Oregon Department of Fish and Wildlife, Conservation Service, 500 NE Oregon Street, Portland, OR 97232.

COWLITZ - LEWIS RIVER BASINS

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	<div style="display: flex; justify-content: space-between; align-items: center;"> <----- DRIER ----- FUTURE CONDITIONS ----- WETTER -----> </div>						
		CHANCE OF EXCEEDING *						
		90% (1000AF)	70% (1000AF)	50% (MOST PROBABLE) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	25 YR. (1000AF)
LEWIS RIVER at Ariel (2)	APR-SEP	655	855	990	80	1120	1320	1244
	APR-JUL	580	750	870	80	990	1160	1024
	APR-JUN	510	660	765	80	870	1020	958
COWLITZ R. bl Mayfield Dam (2)	APR-SEP	1170	1640	1960	96	2280	2750	2036
	APR-JUL	1030	1440	1720	97	2000	2410	1782
	APR-JUN	890	1240	1480	97	1720	2070	1524
COWLITZ R. at Castle Rock (2)	APR-SEP	1690	2260	2650	99	3040	3610	2687
	APR-JUL	1470	1970	2310	99	2650	3150	2343
	APR-JUN	1280	1710	2000	99	2290	2720	2015

RESERVOIR STORAGE (1000AF)					WATERSHED SNOWPACK ANALYSIS		
RESERVOIR	USEABLE CAPACITY	** USEABLE STORAGE **			WATERSHED	NO. COURSES AVG'D	THIS YEAR AS % OF
		THIS YEAR	LAST YEAR	AVG.			LAST YR. AVERAGE
					Cowlitz River	7	78 84
					Lewis River	4	55 52

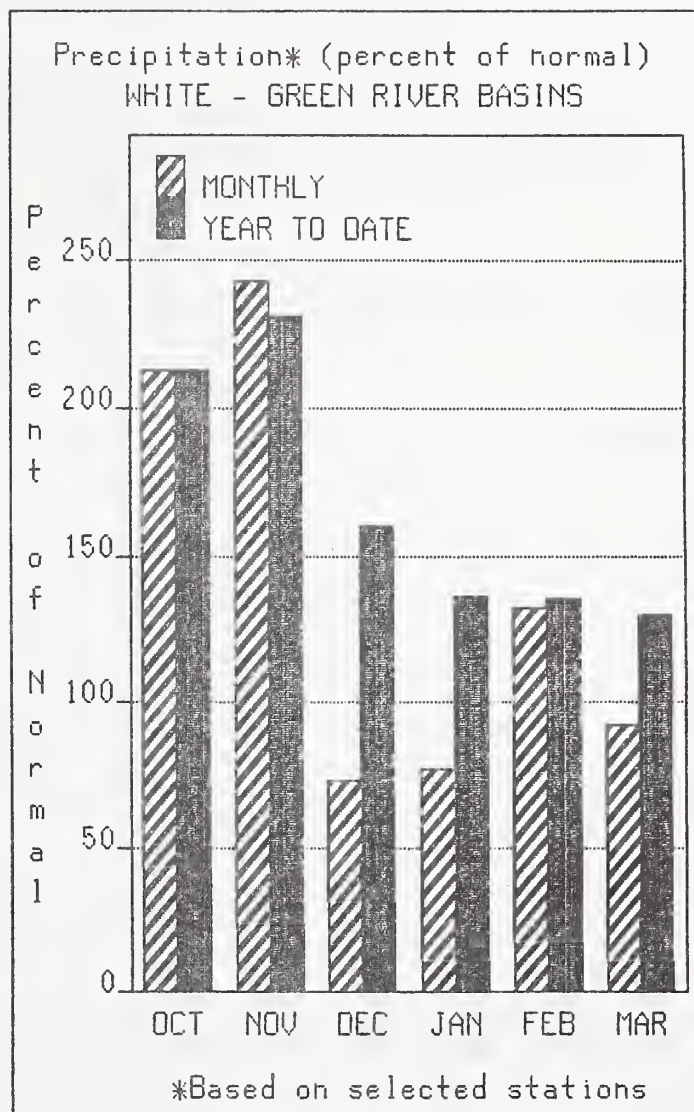
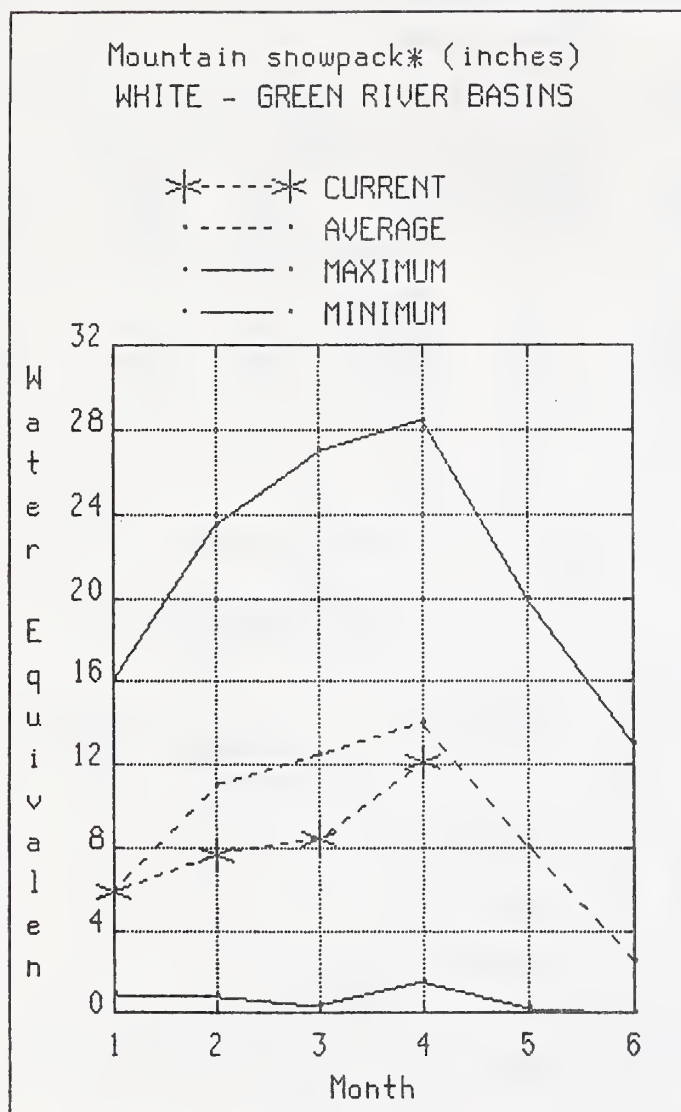
* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

The average is computed for the 1961-1985 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.

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WHITE - GREEN



WATER SUPPLY OUTLOOK:

March precipitation was 92% of normal, bringing the water year-to-date to 130% of average. April 1 snowpack was 95% of normal on the White River and 87% in the Green Basin. Water content on April 1 at the Stampede Pass SNOTEL, at an elevation of 3860 feet, was 35.9 inches, this site has an April 1 average of 42.2 inches. Summer runoff is forecasted to be 86% on the Green River, and 80% of normal on the Cedar River down from 82% last month. Temperatures were two degrees below average for March.

For more information contact your local Soil Conservation Service office.

WHITE - GREEN RIVER BASINS

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	<----- DRIER ----- FUTURE CONDITIONS ----- WETTER ----->						
		CHANCE OF EXCEEDING *						
		90%	70%	50% (MOST PROBABLE)		30%	10%	25 YR.
		(1000AF)	(1000AF)	(1000AF) (% AVG.)		(1000AF)	(1000AF)	(1000AF)
GREEN R bl Howard Hanson Dam (2)	APR-SEP	192	225	250	86	275	310	291
	APR-JUL	173	205	225	86	245	275	261
	APR-JUN	158	186	205	87	225	250	236
CEDAR RIVER nr Cedar Falls	APR-SEP	56	67	74	80	82	93	93

RESERVOIR STORAGE (1000AF)					WATERSHED SNOWPACK ANALYSIS		
RESERVOIR	USEABLE : CAPACITY:	** USEABLE STORAGE **			WATERSHED	NO. COURSES AVG'D	THIS YEAR AS % OF ----- LAST YR. AVERAGE
	: YEAR	THIS YEAR	LAST YEAR	AVG.			
					White River	3	100 95
					Green River	4	78 87
					Cedar River	2	47 37

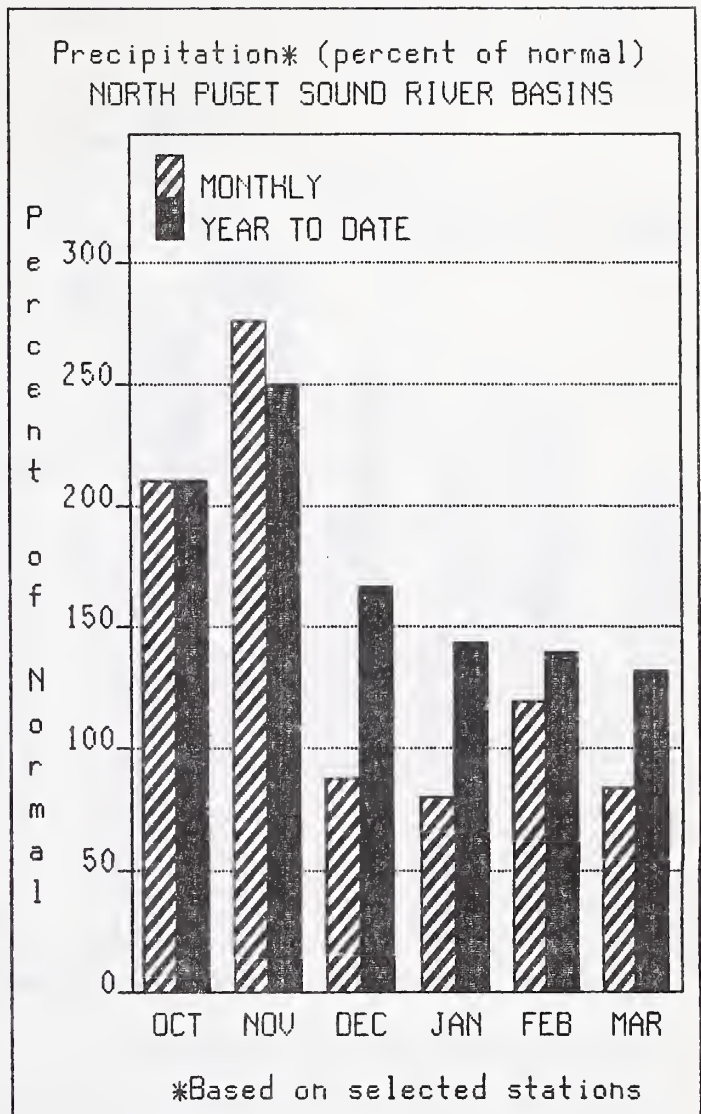
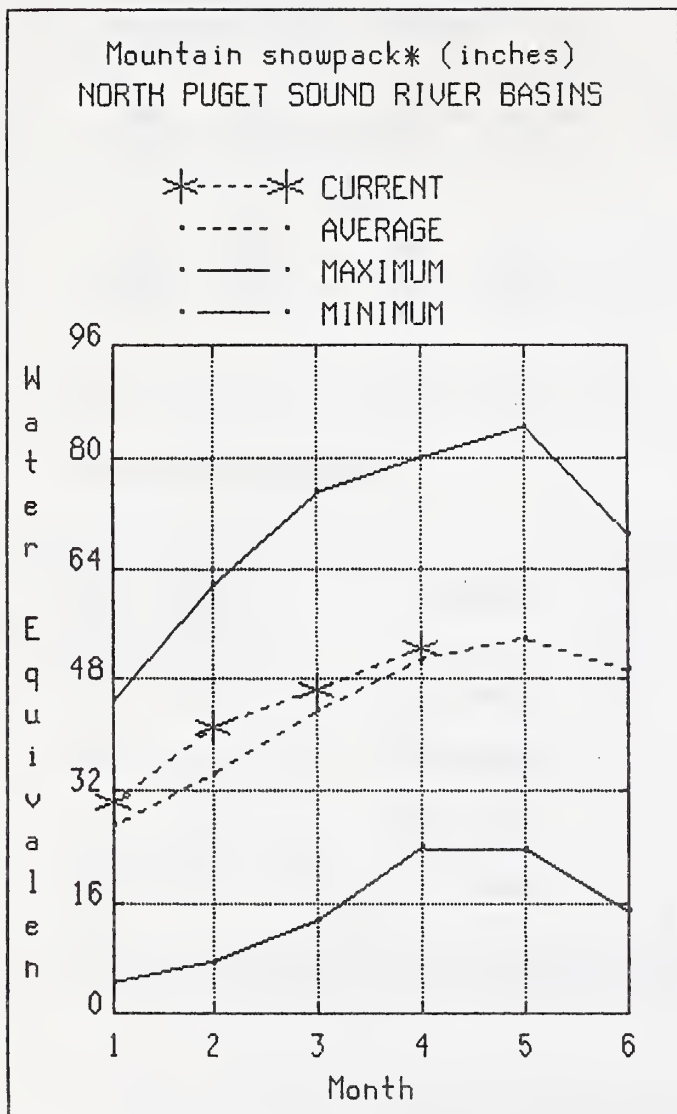
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NORTH PUGET SOUND



WATER SUPPLY

OUTLOOK:

April 1 snow cover in the Skagit Basin is 125% of normal, and in the Baker River it was 101%. Rainy Pass SNOTEL at elevation 4780 feet, has 61.0 inches of water content; normal April 1 water content is 46.3 inches. March streamflow in the Skagit River was 205% of average. Forecast for the Skagit River is 120% of normal for the spring and summer period. April 1 reservoir storage is above average, with Ross Lake reservoir at 212% of normal and 45% of capacity. Precipitation for March was 84% of average with a water year-to-date at 132% of normal. March temperatures were two degrees below normal.

For more information contact your local Soil Conservation Service Office.

NORTH PUGET SOUND RIVER BASINS

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	<div> <div><----- DRIER -----</div> <div>FUTURE CONDITIONS</div> <div>----- WETTER -----></div> </div>						
		CHANCE OF EXCEEDING *						
		90%	70%	50% (MOST PROBABLE)		30%	10%	25 YR.
		(1000AF)	(1000AF)	(1000AF) (% AVG.)		(1000AF)	(1000AF)	(1000AF)
SKAGIT RIVER at Newhalem (2)	APR-SEP	2360	2570	2720	120	2870	3080	2264
	APR-JUL	1970	2150	2270	120	2390	2570	1891
	APR-JUN	1500	1640	1730	120	1820	1960	1442

RESERVOIR STORAGE (1000AF)					WATERSHED SNOWPACK ANALYSIS		
RESERVOIR	USEABLE : CAPACITY:	** USEABLE STORAGE **			WATERSHED	NO. COURSES AVG'D	THIS YEAR AS % OF
		THIS YEAR	LAST YEAR	AVG.			LAST YR. AVERAGE
ROSS	1404.1	630.8	595.8	298.0	Snoqualmie River	3	68 70
DIABLO RESERVOIR	90.6	86.2	87.5	---	Skykomish River	3	73 90
GORGE RESERVOIR	9.8	8.0	8.2	---	Skagit River	13	124 125
					Baker River	8	102 101

* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

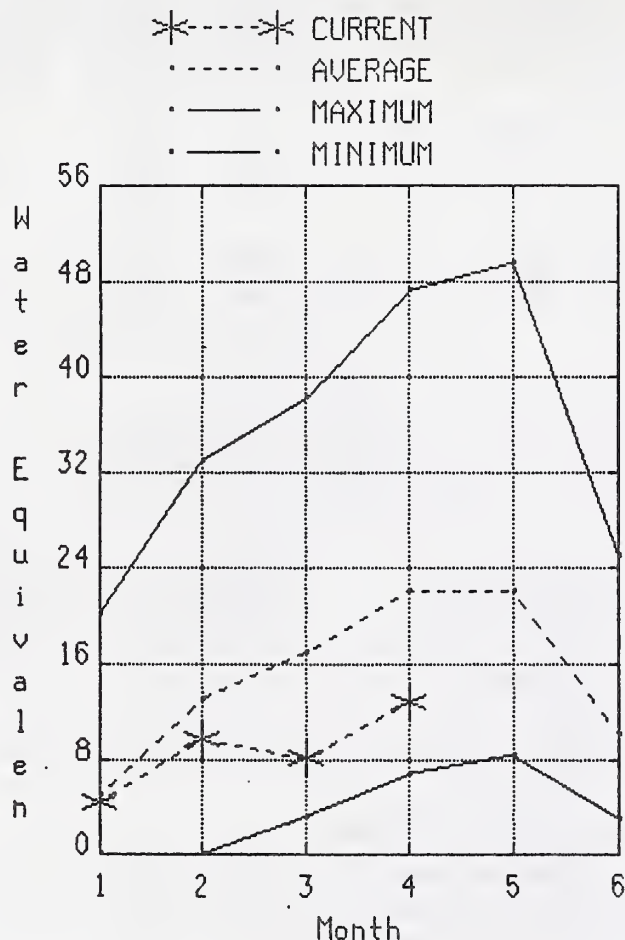
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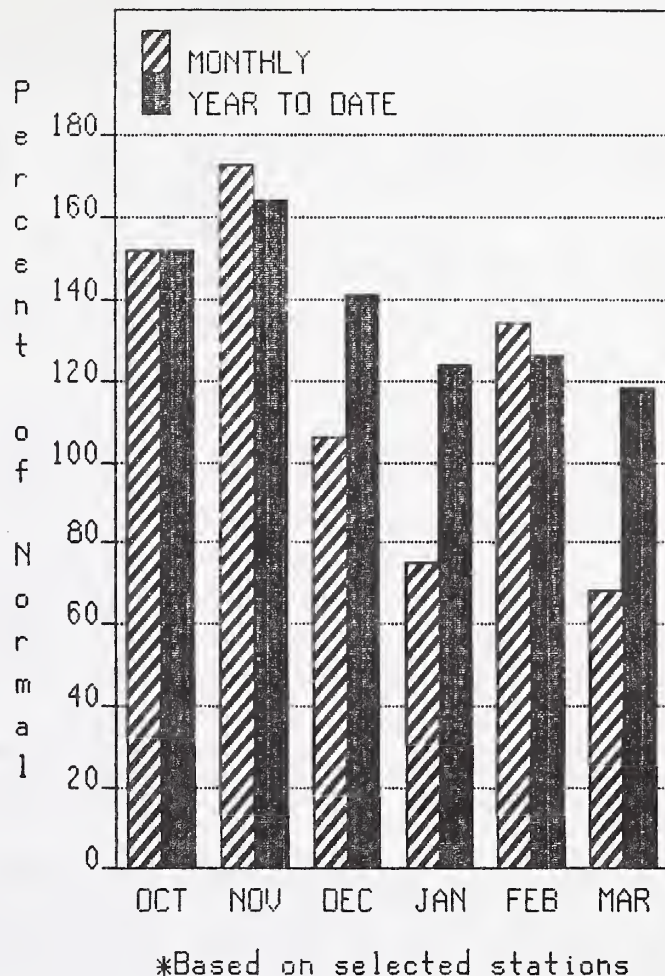
(2) - The value is natural flow - actual flow may be affected by upstream water management.

OLYMPIC

Mountain snowpack* (inches)
OLYMPIC PENINSULA RIVER BASINS



Precipitation* (percent of normal)
OLYMPIC PENINSULA RIVER BASINS



WATER SUPPLY OUTLOOK:

April forecasts of runoff for streamflow in the basin are for 80% of average on the Dungeness River, and 79% for the Elwha River. March precipitation was 68% of average, with water year-to-date precipitation accumulation at 118% of normal. April 1 snow cover in the Olympic basins is at 50% of normal on the Elwha River and 65% on the Dungeness River. The Big Quilcene can expect below normal runoff this summer. The Mount Crag SNOTEL near Quilcene had 13.1 inches on April 1, with the snowpack at Hurricane Ridge at 38 inches in depth and 11.3 inches of water. Temperatures were one degree below normal for March.

For more information contact your local Forest Conservation Service office.

OLYMPIC PENINSULA RIVER BASINS

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	<div> <div><----- DRIER -----</div> <div>FUTURE CONDITIONS</div> <div>----- WETTER -----></div> </div>						
		CHANCE OF EXCEEDING *						
		90%	70%	50% (MOST PROBABLE)		30%	10%	25 YR.
		(1000AF)	(1000AF)	(1000AF) (% AVG.)		(1000AF)	(1000AF)	(1000AF)
DUNGENESS RIVER nr Sequim	APR-SEP	102	117	127	80	137	152	159
	APR-JUL	83	95	103	80	111	124	129
	APR-JUN	63	72	78	80	84	93	97
ELWHA RIVER nr Port Angeles	APR-SEP	345	400	435	79	470	525	553
	APR-JUL	295	335	365	80	395	435	454

RESERVOIR STORAGE (1000AF)					WATERSHED SNOWPACK ANALYSIS		
RESERVOIR	USEABLE : CAPACITY:	** USEABLE STORAGE **			WATERSHED	NO. COURSES AVG'D	THIS YEAR AS % OF LAST YR. AVERAGE
		THIS YEAR	LAST YEAR	AVG.			
					Elwha River	1	54 50
					Morse Creek	1	77 75
					Dungeness River	1	74 65
					Quilcene River	0	0 0
					Wynoochee River	1	33 37

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Basin Outlook Reports

and Federal - State - Private Cooperative Snow Surveys

For more water supply and resource management information, contact:

LOCAL SOIL CONSERVATION SERVICE FIELD OFFICE or William Weller
Water Supply Specialist
Soil Conservation Service
W. 316 Boone Ave.; Suite 450
Spokane, WA 99201-2348
(509) 353-2341

How forecasts are made

Most of the annual streamflow in the Western United States originates as snowfall that has accumulated high in the mountains during winter and early spring. As the snowpack accumulates, hydrologists estimate the runoff that will occur when it melts. Predictions are based on careful measurements of snow water equivalent at selected index points. Precipitation, temperature, soil moisture and antecedent streamflow data are combined with snowpack data to prepare runoff forecasts. Streamflow forecasts are coordinated by Soil Conservation Service and National Weather Service hydrologists. This report presents a comprehensive picture of water supply conditions for areas dependent upon surface runoff. It includes selected streamflow forecasts, summarized snowpack and precipitation data, reservoir storage data, and narratives describing current conditions.

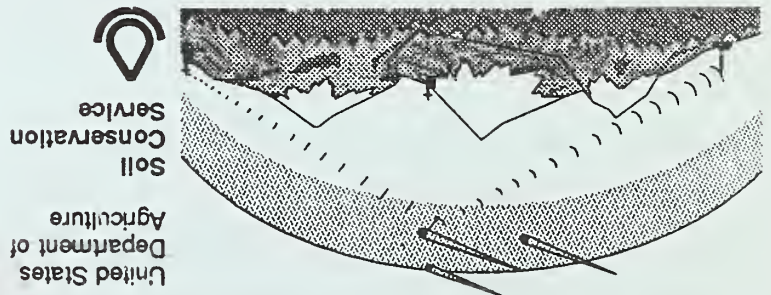
Snowpack data are obtained by using a combination of manual and automated SNOTEL measurement methods. Manual readings of snow depth and water equivalent are taken at locations called snow courses on a monthly or semi-monthly schedule during the winter. In addition, snow water equivalent, precipitation and temperature are monitored on a daily basis and transmitted via meteor burst telemetry to central data collection facilities. Both monthly and daily data are used to project snowmelt runoff.

Forecast uncertainty originates from two sources: (1) uncertainty of future hydrologic and climatic conditions, and (2) error in the forecasting procedure. To express the uncertainty in the most probable forecast, four additional forecasts are provided. The actual streamflow can be expected to exceed the most probable forecast 50% of the time. Similarly, the actual streamflow volume can be expected to exceed the 90% forecast volume 90% of the time. The same is true for the 70%, 30%, and 10% forecasts. Generally, the 90% and 70% forecasts reflect drier than normal hydrologic and climatic conditions; the 30% and 10% forecasts reflect wetter than normal conditions. As the forecast season progresses, a greater portion of the future hydrologic and climatic uncertainty will become known and the additional forecasts will move closer to the most probable forecast.

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Basin Outlook Reports

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In addition to basin outlook reports, a Water Supply Forecast for the Western United States is published by the Soil Conservation Service and National Weather Service monthly, January through May. Reports may be obtained from the Soil Conservation Service, West National Technical Center, 511 Northwest Broadway, Room 248, Portland, OR 97209-3489.

Issued by

William (Bill) Richards
Chief
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